



STIC Search Report

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TO: Ralph J Gitomer
Location: 3d65 / 3e71
Thursday, May 19, 2005
Art Unit: 1651
Phone: 571-272-00916
Serial Number: 10 / 630526

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Search Notes

JAN

Access DB# 153410

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: R. G. TOMER Examiner #: 69630 Date: 5/18/05
Art Unit: 1651 Phone Number 30 _____ Serial Number: 10/636526
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER ☒ DISK ☐ E-MAIL ☐
3 D65 / 3 E 7X

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

JAN

STAFF USE ONLY

Searcher: [Signature]
Searcher Phone #: 22504
Searcher Location: _____
Date Searcher Picked Up: 5/18/05
Date Completed: 5/19/05
Searcher Prep & Review Time: _____
Clerical Prep Time: 60
Online Time: 150

Type of Search

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AA Sequence (#) _____
Structure (#) _____
Bibliographic ☒ _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ☒ _____
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

153410
660

=> fil wpix

FILE 'WPIX' ENTERED AT 09:51:09 ON 19 MAY 2005
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FILE LAST UPDATED: 17 MAY 2005 <20050517/UP>
MOST RECENT DERWENT UPDATE: 200531 <200531/DW>
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FOR DETAILS. <<<

=> d his

(FILE 'WPIX' ENTERED AT 07:00:50 ON 19 MAY 2005)

DEL HIS
L1 252178 S A119/M0,M1,M2,M3,M4,M5,M6 OR ("E33" OR "E33"-?)/MC OR (?POTAS
E POTASSIUM/DCN
E E3+ALL
L2 1030 S E2
L3 1242 S E4
E POTASSIUM/DCN
E E31+ALL
L4 1790 S E2 OR 1202/DRN
E POTASSIUM/DCN
E E48+ALL
L5 6338 S E2 OR 1678/DRN
E POTASSIUM/DCN
E E57+ALL
L6 133 S E2
L7 301 S E4
E POTASSIUM/DCN
E E85+ALL
L8 36 S E2
L9 70 S E4
L10 39 S E24
E POTASSIUM/DCN
E E103+ALL
L11 35 S E2
E POTASSIUM M/DCN
E E16+ALL
L12 4 S E2

L13 5 S E4
 E POTASSIUM N/DCN
 E E9+ALL
 L14 2146 S E2 OR 1743/DRN
 E POTASSIUM O/DCN
 E E7+ALL
 L15 74 S E2
 E POTASSIUM P/DCN
 E E15+ALL
 L16 21 S E2
 L17 2104 S E12 OR 1772/DRN
 L18 1679 S E14 OR 1753/DRN
 L19 1275 S E16 OR 1769/DRN
 E POTASSIUM PHYT/DCN
 E E6+ALL
 L20 70 S E2
 E POTASSIUM PYROPH/DCN
 E E4+ALL
 L21 229 S E2
 E POTASSIUM .S/DCN
 E PYROPHOSPHATE/DCN
 E DIPOTASSIUM PYROPHOSPHATE/DCN
 E TRIPOTASSIUM PYROPHOSPHATE/DCN
 E TETRAPOTASSIUM PYROPHOSPHATE/DCN
 E E4+ALL
 E TETRAPOTASSIUM PYROPHOSPHATE/DCN
 E E3+ALL
 L22 229 S E2
 E PHOSPHATE/DCN
 E POTASSIUM PYROPHOSPHATE/CN
 L23 3 S E3
 E DIPOTASSIUM PYROPHOSPHATE/CN
 L24 1 S E3
 E TRIPOTASSIUM PYROPHOSPHATE/CN
 L25 1 S E3
 L26 4 S L23-L25
 L27 249 S (RA2LKL OR RA2LKJ OR RA0WG6 OR R03330)/DCN
 E POTASSIUM PHOSPHATE/CN
 L28 5 S E3-E8
 E DIPOTASSIUM PHOSPHATE/CN
 E TRIPOTASSIUM PHOSPHATE/CN
 E TETRAPOTASSIUM PHOSPHATE/CN
 L29 1 S E6
 L30 6 S L28,L29
 L31 587 S (RA4CYY OR RA08C7 OR RA0927)/DCN
 L32 2023 S (KPO4 OR K2PO4 OR K3PO4 OR K4PO4 OR KP2O7 OR K2P2O7 OR K3P2O7
 L33 1823 S KNO3/BIX
 L34 306396 S (?PYROPHOSPH? OR ?POLYPHOSPH? OR POLY PHOSPH? OR ?DIPHOSPH? O
 L35 42071 S NITRATE/BIX
 L36 39764 S L34,L35 AND (?POTASSIUM? OR K)/BIX
 L37 256397 S L1-L33,L36
 L38 290180 S L1-36 NOT L37
 L39 10910 S L37,L38 AND (P910 OR P911 OR P912 OR P913 OR Q254)/M0,M1,M2,M
 L40 14550 S L37,L38 AND (A12-V02B OR A12-V01 OR A12-V03C1 OR A12-V04 OR A
 L41 31287 S L37,L38 AND (A96 OR D21)/DC
 L42 1822 S L37,L38 AND (A61C OR A61J)/IPC
 E A61K007-16/IC,ICM,ICI
 L43 2773 S L37,L38 AND E3-E34
 E A61K007-16/ICS,ICA
 L44 955 S L37,L38 AND E3-E26

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      E A61K007:16/IC,ICM,ICS
      E A61K007:16/ICA,ICI
L45      0 S L37,L38 AND E5,E6
L46      34388 S L39-L44
      E C11D001-12/IC,ICM,ICS
L47      275 S L46 AND E3-E62
      E C11D001-12/ICA,ICI
L48      13 S L46 AND E3-E18
      E C11D001:12/ICI
L49      60 S L46 AND E3-E13
      E SODIUM LAURYL SULFATE/DCN
      E E7+ALL
L50      568 S L46 AND E2
L51      634 S L46 AND (NA OR SODIUM) () (LAURYL SULFATE OR LAURYL SULPHATE OR L
L52      27 S L46 AND SLS/BIX
L53      1 S SODIUM LAURYL SULFATE/CN
L54      236 S L46 AND (NA OR SODIUM) () (DODECYL SULFATE OR DODECYL SULPHATE OR
L55      3 S L46 AND (ANTICERUMEN OR DODECYL () (NA OR SODIUM) () (SULFATE OR
L56      8 S L46 AND (DODECYL SULFATE OR DODECYL SULPHATE) () SODIUM/BIX
L57      14 S L46 AND DODECYL () (SULFATE OR SULPHATE) () SODIUM/BIX
L58      2 S L46 AND (DODECYL SULFURIC OR DODECYL SULPHURIC OR DODECYL () (SUL
L59      1094 S L46 AND (LAURYL SULFATE OR LAURYL SULPHATE OR LAURYL () (SULFATE
L60      7 S L46 AND (LAURYL SULPHURIC OR LAURYL SULFURIC OR LAURYL () (SULPHU
L61      53 S L46 AND ((NA OR SODIUM) (2W) (ALKYL SULFATE OR ALKYL SULPHATE OR
L62      97 S L46 AND (STEPANOL OR TEXAPON OR THROMBOVAR OR TOPOXAN OR HEIL
L63      1811 S L47-L62
L64      2 S L63 AND C11D001-82/IPC
L65      320 S L63 AND (?POLYM?(L) (?SILOX? OR ?SILIC? OR ?SILAN?))/BIX
L66      617 S L63 AND (?SILOX? OR ?SILIC? OR ?SILAN?)/BIX
L67      6 S L63 AND C08L083/IPC
L68      183 S L63 AND (B05-B02C OR C05-B02C OR E31-P06)/MC
L69      117 S L63 AND (A10-E22A OR A08-M01D OR E05-E OR E31-P? OR A01-A03 O
L70      333 S L63 AND (B114 OR B214 OR B314 OR B414 OR B514 OR B614)/M0,M1,
L71      688 S L64-L70
L72      988 S L63 AND (SURFACTANT OR SURFACE(L) ACTIV?)/BIX
L73      436 S L63 AND (A12-W12C OR A08-S03 OR A08-S04 OR A08-S05 OR D11-A O
L74      590 S L63 AND (Q616 OR R319)/M0,M1,M2,M3,M4,M5,M6
L75      433 S L71 AND L72-L74
L76      274 S L75 AND (?SORBITAN? OR ?BETAIN? OR ?SARCOSIN? OR ?TAURAT? OR
L77      58 S L75 AND QUAT? AMMON?/BIX
L78      11 S L75 AND (C11D001-62 OR C11D001-90)/IPC
L79      82 S L75 AND (D09-A01B OR D11-A02A OR B10-A22 OR C10-A22 OR E10-A2
L80      290 S L76-L79
L81      1 S L80 AND C11D007-10/IPC
L82      57 S L80 AND C11D/IPC
L83      349613 S L37,L38 AND PY<=1999
L84      424680 S L37,L38 AND PRY<=1999
L85      295027 S L37,L38 AND AY<=1999
L86      424865 S L83-L85
L87      11182 S L86 AND C11D/IPC
L88      20177 S L86 AND (A96 OR D21)/DC
L89      1360 S L86 AND (A61C OR A61J)/IPC
L90      7345 S L86 AND (P910 OR P911 OR P912 OR P913 OR Q254)/M0,M1,M2,M3,M4
L91      9343 S L86 AND (A12-V02B OR A12-V01 OR A12-V03C1 OR A12-V04 OR A12-V
      E A61K007-16/IC,ICM,ICS
L92      2118 S L86 AND E3-E47
      E A61K007-16/ICA,ICI
L93      58 S L86 AND E3-E13
      E A61K007:16/ICI
L94      0 S L86 AND E4,E5

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L95 31745 S L87-L94
 L96 1018 S L95 AND L63
 L97 305 S L96 AND L71
 L98 212 S L75 AND L96
 L99 131 S L80 AND L96
 L100 212 S L97 AND L98,L99
 L101 93 S L97-L99 NOT L100
 L102 305 S L97-L101
 L103 75 S L102 AND ?POTASSIUM?/BIX
 SEL DN AN 1 9 10 13 15 16 20 28 29 31 33 34 37 39 43-47 49 53-5
 L104 31 S L103 AND E1-E62
 L105 68 S L102 AND L2-L33,L36
 L106 62 S L102 AND A119/M0,M1,M2,M3,M4,M5,M6
 L107 42 S L105,L106 NOT L103
 E R04838+ALL/DCN
 E R05327+ALL/DCN
 E R01202+ALL/DCN
 SEL DN AN 14 32 39
 L108 3 S E1-E5 AND L107
 L109 34 S L104,L108
 L110 188 S L102 NOT L103-L109
 E R01287+ALL/DCN
 SEL DN AN 72
 L111 1 S L110 AND E1-E2
 L112 35 S L109,L111 AND L1-L111
 L113 35 S L112 AND (?POTASSIUM? OR K OR NA OR ?SODIUM?)/BIX
 L114 17 S L113 AND SURFACTANT/BIX
 L115 29 S L113 AND ?PHOSPH?/BIX
 L116 10 S L113 AND ?NITRATE?/BIX
 L117 32 S L113 AND (?SULFAT? OR ?SULPHAT?)/BIX
 L118 11 S L113 AND (FATTY OR ?SORBITAN? OR ?SARCOSIN? OR ?TAURAT? OR ?T
 L119 34 S L113 AND (SI OR SIO2 OR ?SILIC? OR ?SILOX? OR ?SILAN?)/BIX
 E GALLOPO/AU
 L120 30 S E4-E10
 E NELSON D/AU
 L121 164 S E3-E5,E11,E12
 L122 24 S L37,L38 AND L120,L121
 L123 24 S L86 AND L122
 L124 17 S L123 AND L95
 L125 3 S L124 AND L96
 L126 2 S L125 NOT POLYPEPTIDE/TI
 L127 14 S L124 NOT L125
 SEL DN AN 11
 L128 1 S L127 AND E1-E2
 E R01732+ALL/DCN
 E 9431-F3001+ALL/DCN
 E 9431-F3001+ALL/DCN
 E 9531-F3001+ALL/DCN
 E 9531-F3001/SDCN
 L129 36 S L126,L128,L112-L119

FILE 'WPIX' ENTERED AT 09:51:09 ON 19 MAY 2005

=> d all abeq tech abex tot

L129 ANSWER 1 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-516878 [49] WPIX
 CR 2001-374620 [39]; 2001-408051 [43]; 2001-602319 [68]; 2003-851966 [79];
 2004-580088 [56]
 DNC C2004-190694

jan delaval - 19 may 2005

TI Method of enhancing fluoride incorporation and remineralization of a subject's teeth involves administering to oral cavity a composition comprising **phosphonate** group having polymeric mineral **surface active** agent and fluoride ion sources.

DC A14 A96 B05 D21 E19 E37

IN BAIG, A A; FALLER, R V; WHITE, D J

PA (PROC) PROCTER & GAMBLE CO

CYC 1

PI US 2004126335 A1 20040701 (200449)* 10 A61K007-18 <--

ADT US 2004126335 A1 **Provisional US 1999-165351P 19991112**, CIP of US 2000-710250 20001110, CIP of US 2002-319108 20021213, US 2003-734381 20031212

FDT US 2004126335 A1 CIP of US 6685920, CIP of US 6713049

PRAI **US 1999-165351P 19991112**; US 2000-710250 20001110; US 2002-319108 20021213; US 2003-734381 20031212

IC ICM **A61K007-18**

AB US2004126335 A UPAB: 20040901

NOVELTY - A method of enhancing fluoride incorporation and remineralization of a subject's teeth involves administering to the subject's oral cavity a composition comprising **phosphonate** group containing polymeric mineral **surface active** agent and fluoride ion sources.

ACTIVITY - Antiinflammatory; Antibacterial.

MECHANISM OF ACTION - None given.

USE - For enhancing fluoride incorporation and remineralization of a subject's teeth and for treating gingivitis, periodontal diseases and oral infections (claimed).

ADVANTAGE - The method provides enhanced fluoride uptake and superior efficacy in providing enhanced protection of teeth against caries and cavities and increased resistance to acid demineralization associated with caries processes as well as anticalculus benefits. The **phosphonate** group containing polymeric mineral **surface-active** agent provides effective desorption of portions of undesirable adsorbed pellicle proteins, in particular those associated with tooth stain binding, calculus development and attraction of undesirable microbial species, creating a hydrophilic tooth **surface** immediately after treatment, maintaining **surface** conditioning effects and control of pellicle film for extended periods, following product use, including post brushing and throughout more extended periods.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **A12-V03C1; A12-V04B**; B04-C01F; B04-C03B; B04-N04A; B05-A01A; B05-A01B; B05-A02; B05-C07; B05-C08; B06-E05; B07-D04A; B07-D04D; B07-D05; B07-D12; B07-E03; B10-A13C; B10-A17; **B10-A22**; B10-D03; B10-E02; B14-A01; **B14-N06B**; **D08-A; D08-B08**; E05-G03C; E06-E05; E07-H; E10-A17B; E10-A22A; E10-D03B; E10-E02F1; E31-C; E31-E; E31-K05; E31-K07; **E33-B**; E34-D; E35-A; E35-C; E35-F; E35-H

TECH UPTX: 20040802

TECHNOLOGY FOCUS - POLYMERS - Preferred Components: The **phosphonate** group containing polymeric mineral **surface-active** agent is selected from copolymers or cotelomers prepared from copolymerizing (meth) acrylate monomers with **disphosphonate** or **polyphosphonate** containing monomers (preferably **disphosphonate/acrylate** copolymer or cotelomer).

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The oral care composition additionally comprises at least one additional oral care agent

selected from antimicrobial/antiplaque agent, biofilm inhibiting agent, dentinal desensitizing agent, anticalculus agent, calcium ion source, strontium ion source, **phosphate** ion source, teeth whitening agent and/or odor masking agent (preferably calcium ion source, strontium ion source or **phosphate** ion source).

Preferred Components: The antimicrobial/antiplaque agent is triclosan, cetylpyridinium chloride, chlorhexidine, alexidine, hexetidine, sanguinarine, benzalkonium chloride, salicylanilide, domiphen bromide, cetylpyridinium chloride, tetradecylpyridinium chloride, N-tetradecyl-4-ethylpyridinium chloride, octenidine, delmopinol octapinol, nisin, zinc ion source, stannous ion source, copper ion source and/or essential oil. The desensitizing agent is a salt of **potassium**, calcium, strontium or tin. The teeth whitening agent is hydrogen peroxide, calcium peroxide, urea peroxide, **sodium** percarbonate and/or **sodium** chlorite.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: The fluoride ion source is **sodium** fluoride, stannous fluoride, indium fluoride, amine fluoride or **sodium monofluorophosphate**. The fluoride ion source comprises 50 - 5000 ppm of the free fluoride ions.

ABEX UPTX: 20040802

ADMINISTRATION - The oral care composition is applied in the form of a toothpaste, tooth powder, tooth gel, mouth-rinse, denture product, mouth-spray, lozenge, chewable dentifrice tablet or chewing gum (claimed), or topical oral gel.

EXAMPLE - A dentifrice formulation comprised (unit not given) 70% sorbitol (58.74), **silica** (20), purified water (8.961), 28% **sodium lauryl sulfate** (4), 25% poly(**disphosphonate** /acrylate (3.636), **disodium phosphate** (1.450), flavor (0.900), **monophosphate** (0.590), titanium dioxide (0.525), xanthan gum (0.475), carbopol (0.300), **sodium** saccharin (0.130), FD and C Blue1 (0.050) and **sodium** fluoride (0.243).

L129 ANSWER 2 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-266603 [31] WPIX

CR 1998-312139 [27]; 2000-412119 [35]; 2000-422852 [36]; 2002-147973 [19]; 2003-016005 [01]; 2004-141600 [14]; 2004-388565 [36]

DNC C2002-079346

TI Reducing staining of dual-phase dentifrice composition, used for reducing gingivitis, involves maintaining efficacy of stannous ion in dentifrice using preset amount **polyphosphate**.

DC D21 E32 E34

IN BACCA, L A; GLANDORF, W M

PA (PROC) PROCTER & GAMBLE CO

CYC 1

PI US 6350436 B1 20020226 (200231)* 8 A61K007-16 <--

ADT US 6350436 B1 CIP of US 1996-754577 19961121, CIP of US 1998-203216 19981130, US 1999-451420 19991130

FDT US 6350436 B1 CIP of US 5939052

PRAI US 1999-451420 19991130; US 1996-754577 19961121; US 1998-203216 19981130

IC ICM A61K007-16

ICS A61K007-18

AB US 6350436 B UPAB: 20040608

NOVELTY - Stain reduction of dual-phase dentifrice composition (DC) involves maintaining efficacy of stannous ion (SI) in dentifrice using **polyphosphate** (PP). DC consists of composition (C1) comprising linear PP of average chain length 6-21 and up to 20% water; and composition (C2) comprising stannous ion (SI). Composition (C1)

is free of ionic fluoride. Molar ratio of PP anion and SI is 0.2:1-5:1.

DETAILED DESCRIPTION - A method for reducing staining of dual-phase dentifrice composition involves maintaining efficacy of stannous ion in the dentrifrice using **polyphosphate**. Dentrifrice composition consists of composition (C1) comprising preset amount of linear **polyphosphate(s)** having average chain length of 6-21; and composition (C2) comprising preset amount of stannous ion. Compositions (C1, C2) are contained in physically separate compartment of dentifrice dispenser. Composition (C1) contains up to 20% of water and is free of ionic fluoride source. Molar ratio of **polyphosphate** anion and stannous ion is 0.2:1-5:1.

USE - For reducing staining of dentifrice composition such as tooth paste that helps to reduce gingivitis, plaque, sensitivity and improve breath.

ADVANTAGE - The efficacy of stannous ion in dentifrice is not reduced by **polyphosphate**. The dentifrice composition has reduced staining which is significantly lower than the staining in conventional dentifrice containing stannous.

Dwg.0/0

FS

CPI

FA

AB; DCN

MC

CPI: D08-B08A; E31-K06; E35-H

TECH

UPTX: 20020516

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: The dentrifrice composition contains 1-20% of **polyphosphate** and 3000-15000 ppm of stannous ion.

The molar ratio of **polyphosphate** anion to stannous ion is 0.5:1-3:1.

The composition contains 2-20% of water, and an optional aqueous carrier comprising fluoride ion source.

Preferred Compounds: The stannous ion is provided by stannous fluoride or stannous chloride dihydrate.

The **polyphosphate** is glass H or glassy **polyphosphate** of formula $XO(XPO_3)_nX$.

X = **sodium** or **potassium**; and

n = 6-21.

ABEX

UPTX: 20020516

EXAMPLE - (In weight%) A dual-phase composition comprising dentifrice composition (C1) consisting of water (2.768), **sodium benzoate** (0.6), carboxy methyl cellulose (0.5), xanthan gum (0.3), polyethylene glycol (1.5), glycerine (36.432), benzoic acid (0.6), flavor (1), propylene glycol (8), **sodium lauryl sulfate** (4), titanium dioxide (1), **sodium saccharin** (0.3), glass H **polyphosphate** (15) and **silica** (28); and composition (C2) consisting of water (21.84), color (0.3), glycerine (28.992), **sodium gluconate** (4.16), stannous fluoride (0.908), **sodium hydroxide** (1), **sodium saccharin** (0.3), Poloxamer(TM) (15) and flavor (1), was prepared.

The composition was found to have reduced staining, and the efficacy of the stannous ion in the composition was found to be maintained by **polyphosphate**.

L129 ANSWER 3 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-236889 [29] WPIX

DNC C2002-071623

TI Bulk-water-free dentifrice used as e.g. toothpaste, contains stable mixture of amylopectin and/or modified amylopectin containing discrete solid particles, suspended in liquid matrix material.

DC A96 B07 D21

IN GLACE, W R; IBSEN, R L; SKOLER, G A
 PA (GLAC-I) GLACE W R; (IBSE-I) IBSEN R L; (SKOL-I) SKOLER G A
 CYC 1

PI US 6331291 B1 20011218 (200229)* 20 A61K007-16 <--

ADT US 6331291 B1 Provisional US 1996-51874P 19960530, US
 1997-856606 19970515

PRAI US 1996-51874P 19960530; US 1997-856606
 19970515

IC ICM A61K007-16

ICS A61K005-00; A61K007-20

AB US 6331291 B UPAB: 20020508

NOVELTY - Bulk water free dentifrice comprises a stable mixture of amylopectin containing discrete solid particles and/or modified amylopectin containing discrete solid particles, suspended in a liquid matrix material.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of whitening teeth which comprises subjecting the teeth to a peroxide by placing a bleach gel in a dental tray and placing the dental tray over the teeth, where the teeth are in contact with the bleaching gel as the above dentifrice.

MECHANISM OF ACTION - None given in the source material.

USE - Useful as a toothpaste, bleaching gel, or brushing gel.

ADVANTAGE - The dentifrice has good flow characteristics when pressure is applied to it, and a non-runny consistency when it is at rest, as it is when it is deposited on the toothbrush or the dental tray. It can be exuded with pressure from the tube orifice, and retains the gel/paste consistency throughout without dripping. The dentifrice incorporates the ability of controlling and removing plaque and tartar with regular and thorough brushing and shows that there are formulations of further crosslinked amylopectin that provide good fluidity in gel/paste compositions, especially for dental use. The dentifrice results in a thick tooth coating as compared to water-based compositions of the prior art. The thick coating resists rapid decomposition by the action of saliva, delaying the removal of the dentifrice from the teeth. The dentifrice maintains the active ingredients e.g. fluoride, natural enzymes and/or carbamide peroxide, for a longer period in contact with the teeth, resulting in greater opportunity for plaque and tartar removal, effective fluoridation, polishing and/or whitening of the teeth.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A12-V04B; B04-A10; B04-C03B; B05-A01B; B05-B02A3;
 B05-B02C; B05-C07; B05-C08; B06-F03; B10-A09A; B10-A13C;
 B10-C02; B10-E02; B10-E04C; B12-M02A; B14-N06A;
 D08-A05; D08-B08A

TECH UPTX: 20020508

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Component: The dentifrice contains flavoring additive, whitener, brightener and/or fluoride; carbamide peroxide, sodium monofluorophosphate (MFP), enzyme, papain, alkali metal citrate and abrasive. The citrate is sodium and/or potassium citrate. The dentifrice is a thixotropic, smooth-flowing liquid, bulk-water-free dentifrice gel/paste. The dispersed solids in the dentifrice gel/paste are coated by a distinct liquid phase that contributes a sheen to the product. The dentifrice gel/paste has a high surface sheen. It is a heterogeneous uniform mixture of at least two phases.

The first phase is a liquid continuous phase comprising the anhydrous organic hydroxylated liquid matrix material. The second phase comprises fine particles containing solid particles of acylated amylopectin. The dentifrice includes a small quantity of high molecular weight acidic

polymer which is a carboxylated **polymer** or **silica**, preferably a carbomer. It comprises a mixture of a limited quantity of granulated, finely and uniformly dispersed, esterified amylopectin and/or esterified amylose with a relatively small amount of a powered carbomer **polymer**, both in the anhydrous hydroxylated organic liquid matrix material that wets each component and allows the formation of the gelled state. It forms a sticky and tacky film on teeth that withstands non aqueous rubbing with a toothbrush, but which will incrementally disperse on contact with water and saliva. It clings to teeth enamel surfaces to which it is applied in the absence of added water and/or saliva. It extrudes from a tube or syringe orifice opening as a stable creamy fluid having a uniform viscosity, that is cleanly, without forming a sticky mess on a surface at the orifice opening, a patient hands, a brush handle and a dental tray, cleaved like soft, non-fluid butter, and nearly deposited on another surface. It maintains its creamy flowable viscosity over extended periods of time, even when heated at temperatures as high as 40degreesC. It has a stable viscous creamy texture when extruded from a tube or syringe orifice. It retains the creamy characteristic when deposited on the surface. It forms a glistening and tacky white-opaque film without adding pigmentation or colorant and when spread over a solid surface. It is not easily wiped away from the surface. The white-opaque film bonds to the surface. The surface of the dentifrice gel/paste exhibits glistening brightness and luster. The dentifrice gel/paste has a viscosity of 50000-200000 (preferably 75000-150000) cP when measured at 23.5degreesC on a Brookfield Viscometer, Model DV-II, spindle 6, at 10 rpms.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Component: The abrasive is an aluminum oxide, a **silicon** oxide, or a mixture of aluminum oxide and **silicon** oxide abrasives.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Component: The liquid matrix material is an inert anhydrous organic hydroxylated liquid matrix material. The modified homopolysaccharide discrete particles contain esterified amylopectin and/or esterified amylose. The amount of esterified amylopectin and/or esterified amylose by weight in the dentifrice gel exceeds the weight of the carbomer **polymer**. The weight of the matrix material exceeds the weight of both the esterified amylose pectin and/or esterified amylose and the carbomer **polymer**. The organic hydroxylated liquid matrix material comprises at least one liquid which remains liquid at 0degreesC or lower to 290degreesC or higher as determined at atmosphere pressure, aliphatic organic polyol(s) or one or more glycerine and propylene glycols of formula $H-(O-C(H)(CH_3)-CH_2-O)_x-H$, preferably glycerine and/or propylene glycol.
x = 1-5.

ABEX

UPTX: 20020508

ADMINISTRATION - None given in the source material.

EXAMPLE - A dentifrice contained (in weight%): glycerine (34.35), propylene glycol 3.02% (2.01), carbopol 940 (0.48), **sodium** citrate (3.26), saccharin (0.18), **sodium** MFP (1.05), National 4012 (National Starch, 1.9), Colflo 67 (National Starch, 6.69), syloident 573 (24.16), aerosil 200 (4.12), hydrated aluminum oxide (9.03), papain (0.8), urea hydrogen peroxide (9.1), **sodium lauryl sulfate** (1.38), and wintergreen flavor (1.49).

L129 ANSWER 4 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-549772 [61] WPIX

DNC C2001-163564

TI Dentifrice such as tooth paste for cleaning teeth and gum, comprises

homogeneous mixture of organic polyol, cooked starch as gelling agent, abrasive filler, and agent such as bleaching agent and peroxide stabilizer.

DC All A96 D21

IN CHADWICK, T C; IBSEN, R; MATTHEWS, A; PINEDA, R R; IBSEN, R L; PINEDA, R
PA (DENM-N) DEN MAT CORP; (CHAD-I) CHADWICK T C; (IBSE-I) IBSEN R; (MATT-I) MATTHEWS A; (PINE-I) PINEDA R R

CYC 95

PI WO 2001045660 A1 20010628 (200161)* EN 25 A61K007-16 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001022858 A 20010703 (200164) A61K007-16 <--

US 2002006386 A1 20020117 (200212) A61K007-16 <--

EP 1244422 A1 20021002 (200265) EN A61K007-16 <--

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

US 6511654 B2 20030128 (200311) A61K007-16 <--

JP 2003518032 W 20030603 (200346) 27 A61K007-16 <--

AU 773109 B2 20040520 (200462) A61K007-16 <--

MX 2002006348 A1 20030901 (200465) A61K007-16 <--

ADT WO 2001045660 A1 WO 2000-US34812 20001221; AU 2001022858 A AU 2001-22858
20001221; US 2002006386 A1 **Provisional US 1999-171596P 19991223**,
US 2000-740982 20001221; EP 1244422 A1 EP 2000-986666 20001221, WO
2000-US34812 20001221; US 6511654 B2 **Provisional US 1999-171596P**
19991223, US 2000-740982 20001221; JP 2003518032 W WO 2000-US34812
20001221, JP 2001-546400 20001221; AU 773109 B2 AU 2001-22858 20001221; MX
2002006348 A1 WO 2000-US34812 20001221, MX 2002-6348 20020621

FDT AU 2001022858 A Based on WO 2001045660; EP 1244422 A1 Based on WO
2001045660; JP 2003518032 W Based on WO 2001045660; AU 773109 B2 Previous
Publ. AU 2001022858, Based on WO 2001045660; MX 2002006348 A1 Based on WO
2001045660

PRAI **US 1999-171596P 19991223**; US 2000-740982
20001221

IC ICM A61K007-16

ICS A61K007-18; A61K007-20; A61K007-28

AB WO 2001045660 A UPAB: 20011024

NOVELTY - Dentifrice, comprises homogeneous mixture of organic polyol, cooked starch as gelling agent, abrasive filler, and agent such as bleaching agent and peroxide stabilizer.

DETAILED DESCRIPTION - A stable, tacky, glossy, smooth flowing, thixotropic, organic polyol-based anhydrous dentifrice comprises a homogeneous mixture of one or more low molecular weight organic polyols, one or more gelling agents from cooked starch particles, one or more mildly abrasive fillers and optionally various other compounds such as anti-caries agents, anti-plaque agents, anti-calculus agents, bleaching agents, peroxide stabilizers, desensitizing agents, whiteners, anti-stain agents, breath fresheners, flavorants, sweeteners, colorants, buffers, **surfactants** and anti-bacterial agents. The dentifrice exhibits high residence time.

An INDEPENDENT CLAIM is also included for preparation of dentifrice which involves forming a gel by cooking starch particles in presence of one or more organic polyols. Then mild abrasives and other compound such as anti-caries agents, anti-plaque agents, anti-calculus agents, bleaching agents, peroxide stabilizers, desensitizing agents, whiteners, anti-stain agents, breath fresheners, flavorants, sweeteners, colorants, buffers, **surfactants** or anti-bacterial agents, are added to the obtained

gel.

USE - As dentifrice such as tooth paste or gel for cleaning, bleaching, whitening, and treating teeth and gums.

ADVANTAGE - The dentifrice is stable, tacky, glossy, smooth flowing, thixotropic and exhibits high residence time. The dentifrice has an ability to maintain its viscosity for an extended period of time, even when heated at 45 deg. C. The dentifrice does not hardened within the tube during storage. The dentifrice exhibits a reduced tendency to evolve oxygen when peroxide bleaching agents are added. The dentifrice exhibits a shelf-life of at least 36 months when stored at or below 30 deg. C and a high surface gloss when freshly dispensed on teeth. The dentifrice forms a sticky film on teeth and gums which is able to withstand the brushing action of toothbrush. The composition partially or fully liquefies when agitated and returns to a gel like state at rest. The thixotropic dentifrice flows easily when pressure is applied and exhibits a non-runny consistency when pressure is released.

Dwg.0/0

FS

CPI

FA

AB

MC

CPI: A03-A00A; **A12-V04B**; D08-A; D08-A05;

D08-B08

TECH

UPTX: 20011024

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The organic polyols are glycerin, propylene glycol, xylitol, sorbitol, mannitol, lactitol, maltitol and/or erythritol. The mildly abrasive fillers are **silica**, alumina, dicalcium **phosphate** and/or calcium carbonate. The starch particles contain amylose, amylopectin, acylated amylose and/or acylated amylopectin. The cooked starch particles are used as gelling agent.

Preferred Amount: The dentifrice comprises 30-85% of organic polyols, 1-60% of fillers and 1-20% of cooked starch particles based on total weight of the dentifrice.

Preferred Starch Particles: The starch particles are cooked to a point where they cease to birefringent and at least some of the boundaries in the particles become indistinct. The starch particles are subjected to partial pre-cooking (cold-cooked) before adding to organic polyol and therefore can be fully cooked at lower temperature in less time. The starch's **polymer** chains disentangle during cooking and swell upto 3 fold. The starch particles are organic polyols are cooked at a temperature at least 80degreesC for at least 5 minutes with continuous stirring. The mixture is cooled before to the addition of heat labile components.

Preferred Composition: The dentifrice comprises (In %) organic polyol(s) (30.0-85.0), preferably glycerin 99.7% (50.04), buffering agent(s) (0.5-10.0), preferably **sodium** citrate (2.37), bleaching agent(s) (0.1-10.0), preferably carbamide peroxide (7.00), sweetener(s) (0.01-20.0), preferably **sodium** saccharin (0.11), fluoride ion source (0.15), preferably **sodium monofluorophosphate** (MFP) (0.88), **surfactant**(s) (0.5-5.0), preferably **sodium lauryl sulfate** (1.00), abrasive filler(s) (1.0-60.0), preferably **silica** (14.80), alumina (3.35) and dicalcium **phosphate** (DCP) (8.10), papain (0.25-0.8), preferably (0.68), desensitizer (5.00) such as citric acid (0.48) and **potassium nitrate** (5.00), flavorants (0.5-1.5), preferably (1.10), peroxide stabilizer (0.05-0.15), preferably calcium **disodium** ethylenediamine tetraacetic acid (EDTA) (0.09) and starch (3.5-10.0), preferably (5.00).

ABEX

UPTX: 20011024

EXAMPLE - (In %) Cold-cooked starch was dispersed into a vessel containing glycerin (40.71). The vessel was placed into an oven and heated at

130degreesC for 10 minutes. When the gelation was completed, the vessel was removed and the contents were transferred into a mixing bowl. Sodium citrate (2.47), sodium saccharin (0.13), sodium MFP (0.85), calcium nitrate EDTA, citric acid (0.40), sodium lauryl sulfate (1.03), sylodent (19.07), DCP (19.56) and polar tex (5.00) were mixed to form a smooth paste. Flavor (1.11), papain (0.68) and urea peroxide (9.06) were incorporated finally until a homogeneous paste was formed.

L129 ANSWER 5 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-411434 [44] WPIX

DNC C2001-124632

TI Mouthwash composition for treating dentine hypersensitivity, includes hydrophobic substance.

DC A26 A96 D21

IN MCCORMACK, K J

PA (MCCO-N) MCCORMACK LTD

CYC 1

PI GB 2355658 A 20010502 (200144)* 8 A61K007-16 <--

ADT GB 2355658 A GB 2000-23508 20000926

PRAI GB 1999-22871 19990928

IC ICM A61K007-16

AB GB 2355658 A UPAB: 20010809

NOVELTY - A mouthwash composition comprises a hydrophobic substance.

USE - For treating dentine hypersensitivity (claimed).

ADVANTAGE - The inventive composition provides temporary relief of pain that is directly attributable to the mechanical displacement of tubular fluid by the use of a toothbrush or other dental instrument. The use of hydrophobic substance decreases the surface tension of the tubular fluid within proximal exposed surfaces of the dentine. This reduction in surface tension diminishes the capillary action of the tubules and attenuates outward movement of fluid, thus reducing excitation of the nerve endings and preventing or reducing any sensation of pain. The surface properties of substance spread easily over surfaces encouraging wetting of the proximal surfaces of the exposed dentine.

Dwg.0/0

FS CPI

FA AB

MC CPI: A12-V04B; D08-A

TECH UPTX: 20010809

TECHNOLOGY FOCUS - **POLYMERS** - Preferred Composition: The hydrophobic substance comprises **silicone** oil containing a **polymer of dimethylsiloxane**, simethicone, or dimethicone. The composition comprises 5-70, preferably approximately 15% w/w **silicone** oil.

ABEX UPTX: 20010809

EXAMPLE - A composition was consisted of a liquid mouthwash or rinse containing 5-50, preferably approximately 20% w/w simethicone or dimethicone. A product (100 g) comprising simethicone (20 g) and also other ingredients, e.g. water, alcohol, sorbitol, glycerin, **sodium lauryl sulfate**, **sodium** fluoride, arginine hydrochloride, **potassium** chloride, **sodium** saccharin, polysorbate, **sodium** benzoate, **disodium** phosphate, cetylpyridinium chloride, and antibacterial agents was prepared. The mouthwash had a reduced sensitivity of the teeth, thus reducing any discomfort associated with brushing.

L129 ANSWER 6 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-367353 [38] WPIX

DNC C2001-112612

TI Dentifrice composition, e.g. toothpaste formulations, includes high water content, abrasive material, binder, and polyol humectant.

DC **A96 D21**

IN MARTENSSON, L B; NIEMI, T H

PA (HUBE) HUBER CORP J M

CYC 26

PI WO 2001032135 A1 20010510 (200138)* EN 22 A61K007-16 <--
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: AU BR CN DE GB ID MX PL

AU 2001013524 A 20010514 (200149) A61K007-16 <--

EP 1139993 A1 20011010 (200167) EN A61K007-16 <--
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

BR 2000007272 A 20011016 (200170) A61K007-16 <--

US 6342205 B1 20020129 (200210) A61K007-16 <--

CN 1361678 A 20020731 (200279) A61K007-16 <--

MX 2001006749 A1 20020201 (200362) A61K007-16 <--

ADT WO 2001032135 A1 WO 2000-US29834 20001030; AU 2001013524 A AU 2001-13524 20001030; EP 1139993 A1 EP 2000-975476 20001030, WO 2000-US29834 20001030; BR 2000007272 A BR 2000-7272 20001030, WO 2000-US29834 20001030; US 6342205 B1 **US 1999-430136 19991029**; CN 1361678 A CN 2000-802381 20001030; MX 2001006749 A1 WO 2000-US29834 20001030, MX 2001-6749 20010629

FDT AU 2001013524 A Based on WO 2001032135; EP 1139993 A1 Based on WO 2001032135; BR 2000007272 A Based on WO 2001032135; MX 2001006749 A1 Based on WO 2001032135

PRAI **US 1999-430136 19991029**

IC ICM **A61K007-16**

AB WO 200132135 A UPAB: 20010711

NOVELTY - A high water content dentifrice composition having a viscosity of more than 200000 cP comprises more than 50 weight% water, abrasive material, binder, and polyol humectant.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of making a high water content dentifrice composition.

USE - For tooth.

ADVANTAGE - The high water content dentifrice composition has acceptable stability, mouthfeel, and rheological properties. It is inexpensive to manufacture that can translate into a more affordable product for consumers. It does not overly sag into bristles of a toothbrush due to its high viscosity, yet the texture of the dentifrice formulation is not lumpy or overly tacky.

Dwg.0/0

FS CPI

FA AB

MC CPI: **A12-V04B; D08-A05**

TECH UPTX: 20010711

TECHNOLOGY FOCUS - **POLYMERS** - Preferred Composition: The dentifrice composition comprises (wt.%) abrasive material (8-18), **silica** thickener (8-15), binder (0.5-1.5), and polyol humectant (1-20). The polyol humectant is glycerin, polypropylene glycol, hydrogenated starch hydrolyzates, xylitol, lactitol, hydrogenated corn syrup and/or preferably sorbitol or polyethylene glycol. The binder is carboxymethyl cellulose, polyvinyl pyrrolidone, starch, water-soluble carboxyvinyl **polymer**, gum tragacanth, or xantham gum.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Material: The abrasive material is amorphous **silica**. It can be alumina, **aluminosilicate**, dicalcium **phosphate**, chalk, or precipitated calcium carbonate.

Preferred Composition: The composition also comprises an anti-caries agent, and a source of water-soluble fluoride from **sodium** fluoride, **sodium monofluorophosphate**, stannous

fluoride, **potassium fluoride**, **potassium stannous fluoride**, **triclosan**, **chlorhexidine**, **sodium fluorostannate**, **stannous chlorofluoride**, or **amine fluoride**.
 Preferred Property: The abrasive has an RDA value of 30-150. The composition has a viscosity of 220000-500000, preferably 200000-500000 cP.

ABEX UPTX: 20010711

EXAMPLE - A dentifrice composition comprising (weight%) deionized water (54), 70% sorbitol (18), carboxymethyl cellulose (1.2), titanium dioxide (0.41), **sodium fluoride** (0.24), **sodium saccharin** (0.2), **sodium benzoate** (0.5), Zeodent 113 **silica** (16), Zeodent 165 **silica** (8), **sodium lauryl sulfate** (0.8), and flavor (0.65) was prepared. It had a viscosity at 23degreesC for 1 week (291000), 3 weeks (346330), and 6 weeks (488170). It also had a slight separation (solid and liquid phases), glossy appearance, and good standup (ribbon retained its shape).

L129 ANSWER 7 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-258408 [27] WPIX

DNC C2001-077968

TI Aqueous detergent composition for use as oral compositions for removing or loosening plaque and/or stains, and for reducing dental nerve and/or dentin sensitivity, comprises **sodium alkylsulfate** and **potassium salt**.

DC A96 D21 D25

IN GALLOPO, A R; NELSON, D G A

PA (PFIZ) PFIZER PROD INC

CYC 1

PI CA 2277664 A1 20010119 (200127)* EN 28 A61K007-16 <--

ADT CA 2277664 A1 CA 1999-2277664 19990719

PRAI CA 1999-2277664 19990719

IC ICM A61K007-16

ICS A61K007-075; A61K007-50; C11B009-00; C11D001-14

AB CA 2277664 A UPAB: 20010518

NOVELTY - An aqueous detergent composition comprises a soluble **potassium salt**, **sodium** (8-24 carbon) **alkylsulfate** to remove or loosen debris and/or stains from a surface, and a polar **surfactant**. The polar **surfactant** comprises a hydrophobic portion that can be a 6-30 carbon alkyl or a **polymeric silicone**. The molar ratio of the **surfactant** to the **alkylsulfate** is at least 1:1.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of inhibiting the formation of a **potassium alkylsulfate** precipitate in the aqueous solution by including a polar **surfactant**.

USE - The composition is used in healthcare field, e.g. as dentifrice for removing or loosening plaque and/or stains from dental surfaces, and for reducing dental nerve and/or dentin sensitivity. It is also used in hard surface and fabric cleaning fields. It can have applications in hair and/or body shampoos, bubble baths, shaving creams, dishwashing detergents, upholstery cleaners (e.g. fabric, vinyl, and leather cleaners), carpet detergents, laundry detergents, and hard surface cleaners.

ADVANTAGE - The invention has an enhanced detergent capability and is stable at low temperatures, with the absence of insoluble **potassium lauryl sulfate** precipitate.

Dwg.0/0

FS CPI

FA AB

MC CPI: A12-V04B; D08-A05; D11-A01F1;
 D11-B21

TECH

UPTX: 20010518

TECHNOLOGY FOCUS - CHEMICAL ENGINEERING - Preferred Compositions: The oral composition comprises (wt.%) a soluble **potassium** salt (0.01-20, preferably 1-10 or 0.1-5), **sodium** (8-24C) **alkylsulfate** (0.01-10, preferably 0.1-5 or 0.02-2), a polar **surfactant** (0.01-20, preferably 0.1-20), and an aqueous vehicle. It further comprises a mint flavoring that does not contain menthol. Preferred Form: The oral composition is in the form of an oral rinse, a dentrifice, or a gel.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred **Surfactant**: The **surfactant** can be 6-30C **fatty acid** mono or diester of ethoxylated **sorbitan**, 6-30C **fatty acid** diester of polyethylene glycol, **sodium** salt of 6-30C **fatty acyl sarcosinate**, 6-30C **fatty acyl ester of sarcosine acid**, **sodium** salt of 6-30C **fatty acyl taurate**, **sodium** salt of 6-30C **fatty acyl methyltaurate**, 6-30C **fatty acyl ester of taurine**, 6-30 **fatty acyl ester of methyltaurine acid**, 6-30C **fatty acyl betaine**, or 6-30C **fatty acyl quaternary ammonium chloride**.

TECHNOLOGY FOCUS - POLYMERS - Preferred **Surfactant**: The **surfactant** is dimethicone copolyol, **sodium** dimethicone copolyol acetyl **methyltaurate**, dimethicone copolyol myristyl **ammonium** chloride, or dimethicone copolyol **phosphate**.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Salt: The soluble **potassium** salt is a **potassium pyrophosphate** salt and/or **potassium nitrate**.

ABEX

UPTX: 20010518

EXAMPLE - Xanthan gum (0.03) was dispersed in water (60) and mixed for 15 minutes. The **tetrapotassium pyrophosphate** (1.42), **tetrasodium pyrophosphate** (0.38), and benzoic acid (0.53) were added to the Xanthan gum dispersion. The Poloxamar 407 (0.3), **sodium** benzoate (0.37), **sodium** saccharin (0.03), and sorbitol (20) was added, the resulting mixture A was then mixed for 20 minutes. The **sodium lauryl sulfate** (0.4) was dissolved in alcohol (7) and water (7). Hamposyl L-30 (RTM: **sodium lauroyl sarcosinate**) (1.5) was added, followed by the flavoring (0.18). The remaining water was added, and the resulting mixture B mixed for 10 minutes. Mixture B was slowly added to mixture A and the resulting mixture mixed for 20 minutes. The pH of the formulation was 7-8 and was still clear after approximately at least 1 year at room temperature. All amounts were expressed in weight%.

L129 ANSWER 8 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-017299 [03] WPIX

DNC C2001-004984

TI Oral care product, e.g. toothpaste, containing antimicrobial agent for controlling plaque, with active agent in nanoparticulate form for easy incorporation and increased activity.

DC B05 D21

IN DOLHAINE, H; GREGORI, D; LEINEN, H T; SCHROEDER, C; WUELKNITZ, P

PA (HENK) HENKEL KGAA

CYC 31

PI DE 19919770 A1 20001102 (200103)* 9 A61K007-16 <--
WO 2000066070 A2 20001109 (200103) GE A61K007-00

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU BR CA CN CZ HU JP KR MX NO PL SK US

AU 2000045549 A 20001117 (200111) A61K007-00

ADT DE 19919770 A1 DE 1999-1019770 19990430; WO 2000066070 A2 WO
2000-EP3660 20000422; AU 2000045549 A AU 2000-45549 20000422

FDT AU 2000045549 A Based on WO 2000066070

PRAI DE 1999-19919770 19990430

IC ICM A61K007-00; A61K007-16

AB DE 19919770 A UPAB: 20010116

NOVELTY - The use of nano-particulate antimicrobial active agents (I), having a particle diameter of 5-500 nm, is claimed for the preparation of mouth and/or tooth care products, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for mouth and/or tooth care products containing the nanoparticulate (I).

USE - (I) is used for inhibiting dental plaque, and thus preventing caries and gingivitis.

ADVANTAGE - The use of (I) in nanoparticulate form allows easy incorporation in formulations (especially in the case of sparingly soluble (I)) and improves the antimicrobial activity.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B03-A; B10-A12C; B10-A13D; B10-D03; B10-E02; B14-A01;
B14-N06A; D08-A; D08-B08

TECH UPTX: 20010116

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Components: (I) is sparingly water-soluble and non-basic, especially one or more of 4-hydroxybenzoic acid and its salts and esters, N-(4-chlorophenyl)-N'-(3,4-dichlorophenyl)-urea, 2,4,4'-trichloro-2'-hydroxy-diphenyl ether, 4-chloro-3,5-dimethylphenol, 2,2'-methylene-bis-(6-bromo-4-chloro-phenol), 3-methyl-4-(1-methylethyl)-phenol, 2-benzyl-4-chlorophenol, 3-(4-chlorophenoxy)-1,2-propanediol, 3-iodo-2-propynylbutylcarbamate, vitamin A palmitate, thymol and salicylic acid N-alkylamides (specifically the octylamide or n-decylamide). (I) is obtained in nanoparticulate form by heating (I) above its melting point in a liquid phase (in which (I) is insoluble), adding at least one emulsifier or protective colloid to the obtained oil phase and cooling the emulsion below the m.pt. of (I). The nanoparticles are preferably coated with one or more of emulsifiers and/or protective colloids.

ABEX UPTX: 20010116

ADMINISTRATION - (I) is used in oral preparations (specifically toothpastes or tooth polishing gels) at 0.001-5 weight% (claimed).

EXAMPLE - A mixture of 0.5 g salicylic acid N-octylamide (Ia) (m.pt. 45 degrees C) and 100 g deionized water was heated at 50 degrees C. The 2-phase mixture was treated with 8.9 g **Texapon N 70** (RTM; alkyl ether **sulfate**) to give a clear microemulsion. After cooling to room temperature under stirring, the mixture was evaporated to give 9.4 g of readily redispersible nanoparticles (average size 120 nm) of (Ia) enclosed in a **surfactant** matrix. The particles were incorporated at 1.5 weight% in a toothpaste composition also containing 15 weight% **Sident 12 DS** (RTM; precipitated **silica**), 0.5 % **sodium monofluorophosphate**, 4.5 % anhydrous **potassium nitrate**, 10 % glycerol, 5 % sorbitol, 1 % polyethylene glycol 400, 5 % **silica** thickener, 0.6 % xanthan gum, 0.1 % **sodium saccharin**, 0.1 % aroma, 0.2% 15 % **Cremphor RH60** (RTM; hydrogenated castor oil/60 moles ethylene oxide adduct) and balance water.

AN 2001-015725 [02] WPIX
DNC C2001-004171
TI An anti-tartar dental product comprising a combination of a water soluble calcium **phosphate** at a pH of less than 7 and separately stored combination of an alkaline material and an anti-carries fluoride ion source with a pH of more than 7.5.
DC B05 D21 E19 E37
IN BARROW, S R; LEE, G J; WILLIAMS, D R; ZIEMKIEWICZ, A G; BARROW, S; WILLIAMS, D; ZIEMKIEWICZ, A
PA (LEEG-I) LEE G J; (UNIL) UNILEVER HOME & PERSONAL CARE USA DIV CO; (CHEO) CHESEBROUGH PONDS USA CO DIV CONOPCO INC; (HIND-N) HINDUSTAN LEVER LTD; (UNIL) UNILEVER NV; (UNIL) UNILEVER PLC
CYC 91
PI WO 2000062749 A1 20001026 (200102)* EN 31 A61K007-16 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000034326 A 20001102 (200107)
US 6207139 B1 20010327 (200119)
US 6248310 B1 20010619 (200137) A61K007-16 <--
EP 1178773 A1 20020213 (200219) EN A61K007-16 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
MX 2001010343 A1 20020401 (200363) A61K007-16 <--
ADT WO 2000062749 A1 WO 2000-EP2758 20000328; AU 2000034326 A AU 2000-34326 20000328; US 6207139 B1 **Provisional US 1999-129779P 19990416, US 1999-395064 19990913; US 6248310 B1 Provisional US 1999-129779P 19990416, Div ex US 1999-395064 19990913, US 2000-538564 20000329; EP 1178773 A1 EP 2000-912656 20000328, WO 2000-EP2758 20000328; MX 2001010343 A1 WO 2000-EP2758 20000328, MX 2001-10343 20011012**
FDT AU 2000034326 A Based on WO 2000062749; EP 1178773 A1 Based on WO 2000062749; MX 2001010343 A1 Based on WO 2000062749
PRAI **US 1999-129779P 19990416; US 1999-395064 19990913; US 2000-538564 20000329**
IC ICM A61K007-16
ICS A61K007-18
AB WO 200062749 A UPAB: 20010124
NOVELTY - An anti-tartar dental product comprising a combination of a water soluble calcium **phosphate** at a pH of less than 7 and separately stored combination of an alkaline material and an anti-carries fluoride ion source with a pH of more than 7.5, is new.
DETAILED DESCRIPTION - An anti-tartar dental product comprising a container, an oral preparation of a formulation comprising 0.01 to 30% of a water soluble calcium **phosphate** and/or monolithic combination of water soluble calcium and **phosphate** salts at a pH of less than 7 and a composition including 0.01 to 30% of an alkaline material and an anti-carries fluoride ion source with a pH of greater than 7.5 stored separately from the first composition, and instructions for use, is new.
An INDEPENDENT CLAIM is also included for a method for controlling dental tartar comprising brushing the teeth with the product.
ACTIVITY - Antimicrobial.
The first component typically comprised glycerin (40%), pluronic F-127 (20%), monocalcium **phosphate** monohydrate (1.6%), 35% hydrogen peroxide (4.285%), **phosphoric** acid (0.4%), FD and C blue no.1 (0.01%) and water. The second component typically comprised 70% sorbitol (47%), hydrated **silica** (15%), **sodium** hydrogen

carbonate (10%), sylox 15X (6%), polyethylene glycol 1450 (5%), ethanol (2.84%), **sodium lauryl sulfate** (2.98%), flavor (1.1%), cellulose gum (0.8%), **sodium saccharin** (0.54%), menthol (0.5%), **sodium fluoride** (0.44%), titanium dioxide (0.30%) and water. Use of the products reduced calculus formation by up to 44%.

MECHANISM OF ACTION - None given.

USE - The composition is useful for controlling dental tartar.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B04-C02A1; B04-C03C; B05-A01A; B05-A01B; B05-A03A; B05-A03B; B05-B02A3; **B05-B02C**; B05-C01; B05-C04; B05-C05; B05-C07; B05-C08; B06-F01; B10-A01; B10-A07; B10-A09A; B10-C04E; B10-E02; B10-E04A; B10-E04C; B10-E04D; B12-M02A; **B14-N06A**; **D08-A05**; E05-B01; E05-G09C; E25-D; E31-K05C

TECH UPTX: 20010124

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The water soluble **phosphate** salt is preferably monocalcium hydrogen **phosphate** and the alkaline material is preferably **sodium** hydrogen carbonate, **potassium** hydrogen carbonate, **sodium** hydroxide, **potassium** hydroxide, **sodium** carbonate, **potassium** carbonate, calcium carbonate and/or calcium oxide. The pH of the first composition is preferably 2.5 to 5.5 and the pH of the second composition is preferably 7.2 to 11. The pH of the first composition results from inclusion of hydrogen peroxide, inorganic acids and/or 2-20C carboxylic acids. The monolithic combination of water soluble calcium salts is preferably calcium chloride, calcium **sulfate** or calcium acetate and the respective **phosphate** salts are preferably **sodium phosphate**, ammonium **phosphate** or **sodium ammonium phosphate**. The composition preferably includes 0.01 to 20% of Triclosan, 0.01 to 20% of a zinc salt and 0.01 to 5% of a fluoride compound.

L129 ANSWER 10 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-640071 [62] WPIX

DNC C2000-192674

TI Detergent composition useful in oral, healthcare, hard surface and fabric cleaning fields comprises a **sodium alkylsulfate**, a soluble **potassium** salt and a polar **surfactant**.

DC A26 A96 A97 D21 D25 E19

IN GALLOPO, A R; NELSON, D G A; GALLOPO, A D

PA (PFIZ) PFIZER PROD INC; (GALL-I) GALLOPO A R; (NELS-I) NELSON D G A

CYC 30

PI EP 1040819 A2 20001004 (200062)* EN 15 A61K007-16 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI

AU 2000020807	A	20000914 (200062)			
CA 2300456	A1	20000912 (200062)	EN	A61K007-16	<--
JP 2000281551	A	20001010 (200065)		15 A61K007-16	<--
US 2003072719	A1	20030417 (200329)		A61K007-16	<--
CA 2434740	A1	20000912 (200369)	EN	C11D003-04	<--
US 2004022745	A1	20040205 (200411)		A61K007-16	<--
NZ 514069	A	20040130 (200414)		C11D001-22	<--
CA 2300456	C	20040511 (200432)	EN	A61K007-16	<--
NZ 524610	A	20040924 (200465)		C11D001-22	<--
AU 2004231211	A1	20041223 (200510)#		A61K007-16	<--

ADT EP 1040819 A2 EP 2000-301969 20000310; AU 2000020807 A AU 2000-20807 20000310; CA 2300456 A1 CA 2000-2300456 20000310; JP 2000281551 A JP 2000-66209 20000310; US 2003072719 A1 **Provisional US 1999-124258P**

19990312, Cont of US 2000-503431 20000214, US 2002-42712 20020321; CA 2434740 A1 Div ex CA 2000-2300456 20000310, CA 2000-2434740 20000310; US 2004022745 A1 **Provisional US 1999-124258P 19990312**, Cont of US 2000-503431 20000214, Cont of US 2002-42712 20020321, US 2003-630526 20030730; NZ 514069 A NZ 2000-514069 20000310; CA 2300456 C CA 2000-2300456 20000310; NZ 524610 A Div ex NZ 2000-514069 20000310, NZ 2000-524610 20000310; AU 2004231211 A1 Div ex AU 2000-20807 20000310, AU 2004-231211 20041119

FDT NZ 514069 A Div in NZ 524610; NZ 524610 A Div ex NZ 514069

PRAI **US 1999-124258P 19990312**; US 2000-503431 20000214; US 2002-42712 20020321; US 2003-630526 20030730; AU 2004-231211 20041119

IC ICM **A61K007-16; C11D001-22; C11D003-04**

ICS **A61K007-075; A61K007-48; A61K007-50; A61K033-00; C11D001-10; C11D001-14; C11D001-28; C11D001-37; C11D001-62; C11D001-65; C11D001-74; C11D001-82; C11D001-83; C11D001-831; C11D001-90; C11D001-94; C11D003-06; C11D003-14; C11D003-20; C11D003-382; C11D007-04; C11D007-10; C11D017-08**

AB EP 1040819 A UPAB: 20001130

NOVELTY - An oral composition for reducing dental nerve and/or dentin sensitivity comprises an **active** ingredient, an orally-acceptable vehicle and a flavoring that does not contain a substantial amount of menthol.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an oral or detergent composition comprising:

(a) 0.01-20 weight% of a soluble **potassium** salt;
 (b) 0.01-10 weight% of a **sodium** 8-24C **alkylsulfate**;
 (c) 0.01-20 weight% of a polar **surfactant** comprising a hydrophobic portion which is either a 6-30C alkyl group or a **polymeric silicone** group, the molar ratio of (c) to (b) being at least 1:1; and
 (d) an aqueous vehicle.

USE - The oral composition is used to reduce dental nerve and/or dentin sensitivity and to loosen or remove plaque and/or stains. The detergent composition is used to loosen and/or remove dirt, debris and/or stains from skin, hair, hard **surfaces** or fabric (all claimed).

ADVANTAGE - Inclusion of the polar **surfactant** allows the composition to contain both a **sodium alkylsulfate** and a soluble **potassium** salt without formation of a **potassium alkylsulfate** precipitate.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **A12-V04B; A12-W12A; A12-W12B; D08-A05; D08-B04; D08-B08; D08-B09A; D08-B13; D11-A01A1; D11-A01B2; D11-A01F; D11-A02B1; D11-A03A3; D11-A03A4; D11-B11; D11-D01B; E05-A; E07-A02D; E10-A09A; E10-A09B8; E10-A22D; E10-C02A; E10-C02D1; E10-C04F; E10-G02G1; E31-K05D; E31-K06; E33; E33-B; E33-D; E33-E; E34-D03; E35-H**

TECH UPTX: 20001130

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Oral Composition: The active ingredient for reducing dental nerve and/or dentin sensitivity is **potassium** nitrate, citrate, chloride, oxalate, bicarbonate, (pyro)phosphate or a soluble stannous or strontium salt (e.g. strontium chloride). Salt (a) is preferably **potassium** nitrate or **potassium pyrophosphate** salt(s)

capable of removing or loosening plaque and/or stains.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Surfactant:

Surfactant (c) is a 6-30C fatty acid mono- or diester of ethoxylated sorbitan, a 6-30C fatty acid diester of polyethylene glycol, a sodium salt of a 6-30C fatty acyl sarcosinate, a 6-30C fatty acyl ester of sarcosine acid, a sodium salt of a 6-30C fatty acyl (methyl) taurate, a 6-30C fatty acyl ester of (methyl) taurine, a 6-30C fatty acyl betaine or a 6-30C fatty acyl quat. ammonium chloride.

Preferred Composition: The oral composition may be a rinse, dentifrice or gel. It may contain a flavoring such as mint, clove, cinnamon, anise, sassafras, bubble gum, fruit flavoring, dementholated natural peppermint extract, a synthetic blend or a peppermint flavoring. A dentifrice (gel) may comprise:

- (a) 1-10 wt.% potassium nitrate (or mono-, di-, tri- and/or tetra-potassium pyrophosphate),
- (b) 0.1-5 wt.% sodium lauryl sulfate,
- (c) 0.1-20 wt.% polar surfactant,
- (d) 10-60 wt.% abrasive silica,
- (e) soluble fluoride salt and
- (f) aqueous vehicle.

An oral rinse may comprise:

- (a) 0.1-5 wt.% potassium nitrate and mono-, di-, tri- and/or tetra-potassium pyrophosphate,
- (b) 0.02-2 wt.% sodium lauryl sulfate,
- (c) 0.1-20 wt.% polar surfactant, and
- (d) aqueous vehicle.

TECHNOLOGY FOCUS - POLYMERS - Preferred Surfactant:

Surfactant (c) is a dimethicone copolyol, a sodium dimethicone copolyol acetyl methyltaurate, a dimethicone copolyol myristyl ammonium chloride or a dimethicone copolyol phosphate.

ABEX

UPTX: 20001130

EXAMPLE - A liquid gel dentifrice was prepared from (weight%): hydroxyethyl cellulose (1), PEG-8 (3), glycerin (10), water (18), potassium nitrate (5), sodium fluoride (0.243), HAMPOSYL L-30 (RTM), 30% (4), xanthan gm (0.3), sorbitol, 70% (35.451), sodium saccharin (0.5), SYLODENT 15 (RTM: thickening silica) (8), SYLODENT 750 (RTM: abrasive silica) (10), dye(s) (0.006), sodium lauryl sulfate, 30% (3) and flavoring (1.5).

L129 ANSWER 11 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-499175 [44] WPIX

DNC C2000-149800

TI Dental composition used to occlude dentine tubules comprises two dentifrice components of alkaline and acidic pH with one of the components containing a potassium salt.

DC D21

IN FISHER, S W; GAMBOGI, R J; JOZIAK, M T; MASTERS, J G; TAVSS, E A

PA (COLG) COLGATE PALMOLIVE CO

CYC 91

PI WO 2000042981 A1 20000727 (200044)* EN 20 A61K007-16 <--

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES
 FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
 LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
 TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000027311 A 20000807 (200055) A61K007-16 <--
 US 6180089 B1 20010130 (200108) A61K007-16 <--
 BR 2000007642 A 20011016 (200170) A61K007-16 <--
 EP 1156776 A1 20011128 (200201) EN A61K007-16 <--
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI

CN 1343112 A 20020403 (200247) A61K007-16 <--
 ZA 2001006003 A 20020925 (200275) 34 A61K000-00
 MX 2001007327 A1 20011101 (200279) A61K007-16 <--
 JP 2002535264 W 20021022 (200301) 24 A61K007-16 <--
 AU 762031 B 20030619 (200351) A61K007-16 <--

ADT WO 2000042981 A1 WO 2000-US1220 20000119; AU 2000027311 A AU 2000-27311
 20000119; US 6180089 B1 US 1999-234829 19990121; BR 2000007642 A
 BR 2000-7642 20000119, WO 2000-US1220 20000119; EP 1156776 A1 EP
 2000-905662 20000119, WO 2000-US1220 20000119; CN 1343112 A CN 2000-804716
 20000119; ZA 2001006003 A ZA 2001-6003 20010719; MX 2001007327 A1 MX
 2001-7327 20010719; JP 2002535264 W JP 2000-594438 20000119, WO
 2000-US1220 20000119; AU 762031 B AU 2000-27311 20000119

FDT AU 2000027311 A Based on WO 2000042981; BR 2000007642 A Based on WO
 2000042981; EP 1156776 A1 Based on WO 2000042981; JP 2002535264 W Based on
 WO 2000042981; AU 762031 B Previous Publ. AU 2000027311, Based on WO
 2000042981

PRAI US 1999-234829 19990121

IC ICM A61K000-00; A61K007-16

ICS A61K007-18

AB WO 200042981 A UPAB: 20000913

NOVELTY - A dental composition(1) comprises two separately housed
 dentifrice components(2) of acidic and alkaline pH with at least one of
 the components containing a **potassium** ion releasable
 compound(3).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the
 preparation of (1).

USE - To totally or partially occlude dentin tubules reducing the
 discomfort and pain associated with dental hypersensitivity.

ADVANTAGE - (1) exhibits unexpected improved effectiveness when
 applied to the teeth in obturating dentinal tubules with concomitant
 desensitization of teeth as compared to single component compositions of
 neutral pH.

Dwg.0/3

FS CPI

FA AB

MC CPI: D08-A

TECH UPTX: 20000913

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred **Potassium**
 Compound: (3) is a water soluble **potassium** salt present in the
 first dentifrice component; Preferred Components: The alkaline (2) is an
 aqueous dentifrice having a pH of about 8 - 11 adjusted with
sodium hydroxide. The acidic (2) is an aqueous dentifrice having a
 pH of about 1.0 - 6.0 adjusted with H3PO4. A **silica** abrasive is
 present in (2). A fluoride salt is present in (1).

ABEX UPTX: 20000913

SPECIFIC COMPOUNDS - **Potassium nitrate** is specifically
 claimed as the **potassium** ion releasable compound.

EXAMPLE - A desensitizing composition (Dentifrice I) was prepared from two
 components i.e. component A (having alkaline pH)/component B (having
 acidic pH). Glycerin (25.000/33.704), polyethylene glycol 600 (3.000/-),

xanthan (0.600/0.800), carboxymethyl cellulose (0.400/0.000) were dispersed in a mixer until the mixture became a slurry. FDandC Blue 1(**disodium** salt of dibenzylldiethyldiaminotriphenylcarbinol trisulfonic acid of indigotin) (-/0.300), titanium dioxide (2.000/0.000), **sodium** saccharin (0.400/0.400) were dispersed in the above slurry before the addition of water. Component A had **potassium nitrate** (10,000) dispersed in the slurry, while component B had 85% H₃PO₄ (2,880) dispersed into the slurry. This mixture was mixed for 20 - 30 minutes producing a homogeneous gel phase. The mixture was added to a vacuum mixer and cooled below 105degreesF. Zeodent 115(precipitated amorphous hydrated **silica**) (15.000/22.000), Zeodent 165(amorphous **silica**) (3.000/3.000) and **sodium** bicarbonate (5.000/-) were then added and mixed for 10 - 30 minutes at high speed under a vacuum of about 50 mm Hg providing a homogeneous mixture. A **sodium lauryl sulfate** (1.500/1.500) and flavor (0.900/1.100) were then added to the individual dentifrice components followed by mixing for another 5 - 75 minutes under vacuum of 50 mm Hg. The dentin disks were then treated by brushing for 45 seconds period with the components A and B in 1:1 volume ratio. The pH of component A and B was 7.40 when diluted with deionized water. For comparison another group of similarly prepared disks using a single component Toothpaste C(desensitizing toothpaste) containing NaMPF (0.76 weight%) and KNO₃ (5 weight%) was used. As a control the above procedure was repeated using the **phosphate** buffer solution as the treatment. The treated disks were immersed in tap water (10.25 ml) and agitated to remove dentifrice from the disk surface. The disks were put into the **phosphate** buffer solution between brushings and treated 12 times each over a four day period. Artificial saliva (pH - 7) having the following composition: **phosphate** ion (0.2 mM), CaCl₂ (6.2 mM) and NaCl (150 mM) was tested for the average flow rate (mg/S). The flow rate for dentifrice I = 0.443; for Toothpaste C = 1.02; and control = 1.53. The above results indicated that dentifrice I had a pronounced effect on reducing flow relative to the comparative and the control.

L129 ANSWER 12 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-423192 [36] WPIX

DNC C2000-128053

TI Foaming tablets for improved oral cavity cleaning comprise tableting basic material, foaming agent, grinding agent, organic acid, tooth-protecting agent and additives, are convenient to use and store.

DC A96 B06 D21 E19 E37

IN YANG, J H

PA (SUHE-N) SU HEUNG CAPSULE CO LTD; (SUHE-N) SUHEUNG CAPSULE CO LTD; (YANG-I) YANG J H

CYC 88

PI WO 2000033800 A1 20000615 (200036)* EN 23 A61K007-16 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SL SZ TZ UG ZW
 W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB
 GD GE GH GM HR HU ID IL IN IS JP KE KG KP KZ LC LK LR LS LT LU LV
 MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
 UA UG US UZ VN YU ZA ZW
 AU 2000015134 A 20000626 (200045) A61K007-16 <--
 EP 1054658 A1 20001129 (200063) EN A61K007-16 <--
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 KR 2000038278 A 20000705 (200111) A61K007-16 <--
 KR 294515 B 20010712 (200226) A61K007-16 <--
 US 2002068038 A1 20020606 (200241) A61L009-04
 JP 2002531480 W 20020924 (200278) 21 A61K007-16 <--

ADT WO 2000033800 A1 WO 1999-KR732 19991203; AU 2000015134 A AU 2000-15134 19991203; EP 1054658 A1 EP 1999-957430 19991203, WO 1999-KR732 19991203; KR 2000038278 A KR 1998-53215 19981205; KR 294515 B KR 1998-53215 19981205; US 2002068038 A1 CIP of WO 1999-KR732 19991203, CIP of US 2000-600864 20000727, US 2001-985589 20011105; JP 2002531480 W WO 1999-KR732 19991203, JP 2000-586294 19991203

FDT AU 2000015134 A Based on WO 2000033800; EP 1054658 A1 Based on WO 2000033800; KR 294515 B Previous Publ. KR 2000038278; JP 2002531480 W Based on WO 2000033800

PRAI KR 1998-53215 19981205

IC ICM A61K007-16; A61L009-04
ICS A61K007-18

AB WO 200033800 A UPAB: 20000801
NOVELTY - Foaming tablets for cleaning oral cavity comprise (weight%):
(a) crystalline or powder cellulose and/or edible fiber as tableting material (30-70);
(b) **sodium-**, ammonium- or **potassium-** bicarbonate and/or iron carbonate as foaming agent (10-50);
(c) abrasive (5-20);
(d) organic acid (3-20);
(e) tooth-protecting agent (0.05-1); and
(f) other additives for taste, flavor and color.
USE - The tablets are used to clean the oral cavity (claimed). In tests, the foaming tablets have higher antibacterial activity against Streptococcus mutans; Streptococcus sanguis, Lactobacillus casei and Acetivobacillus than standard toothpaste or liquid oral cleaner
ADVANTAGE - The tablets are convenient to use and store, with sufficient oral cavity-cleaning effects. They have a good tissue feeling when chewed, quickly generate foam by good dissolution in the oral cavity, have excellent tooth-protection properties, and have good flavor and cleaning effects.
Dwg.0/3

FS CPI

FA AB; DCN

MC CPI: A12-V04B; B03-F; B04-C02A; B05-A01B; B05-A02; B05-A03B; B05-B02C; B05-C04; B05-C07; B10-A09A; B10-C02; B10-C04D; B10-C04E; B12-M11J; B14-A01; B14-N06; D08-B08; E10-A07; E10-C02A; E10-C02D2; E10-C02F; E10-C04L1; E31-K05C; E31-K05D; E31-P02B; E31-P03; E31-P05D; E32-A04; E33-B; E33-D; E34-C02; E34-D03; E35-U05

TECH UPTX: 20000801
TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: The abrasive is **silica**, calcium **phosphite** or carbonate, aluminum hydroxide, hydrated or precipitated **silica**, hydrated alumina, **silica** gel, insoluble **sodium metaphosphate**, zirconium **silicate**, **sodium bicarbonate** and/or **aluminosilicate**. The tooth protecting agent is **sodium** fluoride or another fluoride.
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The organic acid is citric, tartaric, malic, gluconic, ascorbic, succinic and/or propionic acid. The tablets further comprise anionic and/or non-ionic **surfactants** as auxiliary foaming agents chosen from **sodium laurylsulfate**, **sodium N-laurylsalcosylate**, N-acyl glutamate, saccharose **fatty ester**, polyoxyethylene hardened castor oil, **sorbitan fatty ester** and/or polyoxyethylene polyoxypropylene **copolymer**.

ABEX UPTX: 20000801
ADMINISTRATION - Administration is oral.

L129 ANSWER 13 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2000-387331 [33] WPIX
 DNC C2000-117505
 TI New toothpaste comprises abrasive calcium compound coated with hydrophobic material to give better storage life in contact with fluoride.
 DC B05 D21 E19
 IN DROMARD, A; LAVAVULT, S
 PA (RHOD) RHODIA CHIM; (DROM-I) DROMARD A; (LAVA-I) LAVAVULT S
 CYC 87
 PI WO 2000027338 A2 20000518 (200033)* FR 26 A61K000-00
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SL SZ TZ UG ZW
 W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GD GE HR HU ID IL IN IS
 JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO NZ PL RO RU SG SI
 SK SL TJ TM TR TT UA UZ VN YU ZA
 FR 2785534 A1 20000512 (200033) A61K007-18 <--
 AU 2000010529 A 20000529 (200041) A61K000-00
 EP 1128799 A2 20010905 (200151) FR A61K007-16 <--
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 BR 9915154 A 20010807 (200152) A61K007-16 <--
 US 2002001569 A1 20020103 (200207) A61K007-18 <--
 CN 1325296 A 20011205 (200223) A61K007-16 <--
 ADT WO 2000027338 A2 WO 1999-FR2725 19991108; FR 2785534 A1 FR
 1998-14231 19981109; AU 2000010529 A AU 2000-10529 19991108
 ; EP 1128799 A2 EP 1999-954081 19991108, WO 1999-FR2725
 19991108; BR 9915154 A BR 1999-15154 19991108, WO
 1999-FR2725 19991108; US 2002001569 A1 Cont of US 1999-433246
 19991104, US 2001-909059 20010719; CN 1325296 A CN 1999-813107
 19991108
 FDT AU 2000010529 A Based on WO 2000027338; EP 1128799 A2 Based on WO
 2000027338; BR 9915154 A Based on WO 2000027338
 PRAI FR 1998-14231 19981109
 IC ICM A61K000-00; A61K007-16; A61K007-18
 AB WO 200027338 A UPAB: 20000712
 NOVELTY - A new toothpaste comprises an abrasive solid calcium-based material coated with a hydrophobic material having at least one fatty chain, preferably of 8-24C and a fluorinated agent.
 ACTIVITY - Antibacterial.
 MECHANISM OF ACTION - None given.
 USE - Toothpaste is useful in the form of a paste, a gel or a cream for treating caries.
 ADVANTAGE - By coating the calcium compound, it is made more compatible with the fluoride, and so it does not lose its anti-caries effect on storage.
 Dwg.0/0
 FS CPI
 FA AB; DCN
 MC CPI: B05-A01A; B05-A01B; B05-A02; B05-B02A2; B05-B02A3; B05-C04; B05-C07; B10-C04; B10-E04C; B10-E04D; B10-G02; B12-M02A; D08-A05; E05-A; E05-B01; E10-A07; E10-C04L; E10-E04L4; E10-E04L5; E10-G02H2; E31-K05C; E31-K05D; E34-D03
 TECH UPTX: 20000712
 TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The calcium-based product is preferably either calcium carbonate or dicalcium phosphate. The calcium compound, preferably calcium carbonate is coated by heating a suspension of this, preferably in an aqueous medium containing the hydrophobic agent, then allowing it to dry. The hydrophobic material used to coat this is preferably any of the following: fatty acids and their salts with ammonium or alkali or alkaline

earth metals, other than calcium, having a greater affinity for the carboxylic anion than for calcium, **fatty** alcohols and ester. Preferred **fatty** esters are natural triglycerides, glycerol-**fatty** acid esters, mono- and di-acetylated esters of glycerol and **fatty** acids, semi-synthetic glycerides, sucroglycerides and/or **fatty** acid sucro-esters. The coating is preferably **sodium** **potassium** or lithium stearate (1-15 wt. % based on the total weight of the particle). The composition containing the particles at 5-40, preferably 5-35, wt. % based on the weight of the final toothpaste. The fluorinated compound is preferably Na, K, Li, Ca, Al or ammonium **monofluorophosphate**, or it is an alkali metal fluoride.

ABEX

UPTX: 20000712

EXAMPLE - **Sodium** stearate (6.12 g) was dissolved in water (2 l) and heated at 65-70 degreesC. Precipitated calcium carbonate (300 g) was added and the mixture stirred at 85 degreesC for 5.5 hours. It was then atomized over 5 hours and the product dried at 100 degreesC for 27 hours. This gave a product (292.1 g) of calcium carbonate coated with **sodium** stearate (2 %). The coated calcium carbonate was incorporated into a toothpaste containing: coated calcium carbonate (40 %), **sodium** fluoride (0.24 %), carboxymethyl cellulose (0.8 %), sorbitol (18 %), **sodium** saccharinate (0.2 %), **sodium** benzoate (0.3 %), **silica** thickener (5 %), **sodium** **lauryl** sulfate 30 % aqueous solution (4 %), flavor and water (to 100 %). This toothpaste, and one in which the calcium carbonate was not coated, were stored at 37 degreesC and the soluble fluoride contents measured over a one month period. The coated sample retained 520 ppm of fluoride from an initial content of 920 ppm, whilst the uncoated had less than 50 ppm from an initial 900 ppm.

L129 ANSWER 14 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-365351 [31] WPIX

CR 1997-054433 [06]; 1998-480898 [41]

DNC C2000-110249

TI Oral composition with increased antibacterial efficacy, comprises a halogenated diphenyl ether, a monoalkyl **phosphate** and another anionic **surfactant**.

DC B05 D21 E19

IN GAFFAR, A; NABI, N

PA (COLG) COLGATE PALMOLIVE CO

CYC 90

PI WO 2000025737 A1 20000511 (200031)* EN 16 A61K007-16 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SL SZ TZ UG ZW
 W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES
 FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
 LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
 TJ TM TR TT UA UG UZ VN YU ZA ZW

AU 9965064 A 20000522 (200040) A61K007-16 <--

US 6110445 A 20000829 (200043) A61K007-16 <--

ADT WO 2000025737 A1 WO 1999-US22941 19991013; AU 9965064 A AU
 1999-65064 19991013; US 6110445 A CIP of US 1995-494744
 19950626, CIP of US 1997-808607 19970228, US
 1998-181892 19981029

FDT AU 9965064 A Based on WO 2000025737; US 6110445 A CIP of US 5605676

PRAI US 1998-181892 19981029; US 1995-494744

19950626; US 1997-808607 19970228

IC ICM A61K007-16

ICS A61K007-18

AB WO 200025737 A UPAB: 20030317

NOVELTY - An oral composition, exhibiting increased antibacterial efficacy, comprises a halogenated diphenyl ether or phenolic antibacterial compound, a substantially pure monoalkyl **phosphate**, and another anionic **surfactant** other than alkyl **phosphate**, in a weight ratio of 1:2-2:1 with monoalkyl **phosphate**, in a vehicle, is new.

DETAILED DESCRIPTION - An **INDEPENDENT CLAIM** is also included for a method for the treatment and prevention of bacterial plaque accumulation on teeth, comprising administering the novel composition to the oral cavity.

ACTIVITY - Antibacterial. A baseline plaque sample was obtained from lingual **surfaces** of mandibular second molars and buccals **surfaces** of maxillary canines, of subjects. The subjects brushed their teeth with 1.5g of a dentifrice containing, by weight, 20% glycerine, 0.3% carageenan, 0.8% **sodium** carboxymethyl cellulose, 0.5% propylene glycol, 0.24% NaF, 0.3% Na saccharin, 0.5% TiO₂, 20.4% sorbitol, 32.4% water, 0.16% NaOH (25% solution), 20% zeodent 115, 2% sylodent 15, 0.3% triclosan, 1% flavor oil, and 1% monolauryl **phosphate** and 0.5% **sodium** lauryl **phosphate**, or 1.5% **sodium** lauryl **sulfate**, or a commercially available antibacterial, antiplaque toothpaste, for 45s. Plaque samples were collected after 6hours. Them plaque samples were placed on slides and treated with 14ml ethidium homodimer, and 5 chloromethylfluorescein diacetate, for 15 minutes. Excess dye was removed from the slides, and they were rinsed with 100ml **phosphate** buffered saline. Live or dead bacteria stained red or green, respectively. The 1% monolauryl **phosphate** containing dentifrice showed a 46.3% increase in the number of dead bacteria, and the 1.5% **sodium** lauryl **sulfate** showed a 22.2% increase in the number of dead bacteria, whereas the commercially available dentifrice showed only a 4.3% increase in dead bacteria.

MECHANISM OF ACTION - None given.

USE - The composition is used to improve the effectiveness of antibacterial compounds in retarding or preventing bacterial plaque accumulation on the teeth.

ADVANTAGE - The monoalkyl **phosphate** increases the uptake and retention of the antibacterial compound on the dental tissue.

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: B05-B01P; B10-A09A; B10-H01; **B14-N06**; **D08-A05**; **D08-B08**; E05-G09D; E10-A09A; E10-E02U; E10-H01C

TECH UPTX: 20000630

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred **surfactant**; The other anionic **surfactant** is **sodium** lauryl **sulfate**. The monoalkyl **phosphate** has the formula (I), and is preferably monolauryl **phosphate**.

R = C₆-18 alkyl or alkenyl group; and

X = H, Na, K, NH₄.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred composition: The composition is a paste dentifrice, and contains the antibacterial agent, preferably triclosan, in a concentration of 0.05-2.0%, by weight. The monoalkyl **phosphate** has a concentration of 0.1-5%, by weight. Where the other anionic **surfactant** is **sodium** lauryl **sulfate**, it is present in the concentration 0.2-3.0%, by weight. The vehicle includes a water phase with a humefactant, preferably glycerine, sorbitol and/or propylene glycol. The water concentration is 25-70%, by weight, and the humefactant concentration is 10-80%, by weight. Dentifrices usually also contain a thickener, such as Irish moss, i-carrageenan, gum tragacanth, starch,

polyvinylpyrrolidone, hydroxyethylpropyl cellulose, hydroxybutyl methyl cellulose, hydroxypropyl methylcellulose, hydroxyethyl, cellulose **sodium** carboxymethyl cellulose, or colloidal **silica**. The composition may also contain 25-5000, preferably 500-1500ppm fluoride ions, as an anticaries agent.

ABEX UPTX: 20000630

ADMINISTRATION - The composition is administered orally, preferably in the form of a dentifrice, gel, mouthwash, chewing gum or lozenge, no dosage is suggested.

L129 ANSWER 15 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-303123 [26] WPIX

DNC C2000-091844

TI Composition for whitening teeth, includes **potassium** hydrogen **peroxymonopersulfate**.

DC A11 A14 A96 D21 E37

IN MCLAUGHLIN, G G

PA (MCLA-I) MCLAUGHLIN G G

CYC 89

PI WO 2000016737 A1 20000330 (200026)* EN 32 A61K007-20 <--

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL

OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES

FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS

LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 9962518 A 20000410 (200035) A61K007-20 <--

ADT WO 2000016737 A1 WO 1999-US21371 19990917; AU 9962518 A AU 1999-62518 19990917

FDT AU 9962518 A Based on WO 2000016737

PRAI US 1998-100779P 19980918

IC ICM A61K007-20

AB WO 200016737 A UPAB: 20000531

NOVELTY - Composition for whitening a tooth in a dental arch comprises at least 30 weight% **potassium** hydrogen **peroxymonopersulfate**.

DETAILED DESCRIPTION - Composition for whitening a tooth in a dental arch comprises at least 30 weight% **potassium** hydrogen **peroxymonopersulfate** (2 KHSO5 KHSO4 K2SO4) in a slurry or in a dry form. It does not cause any visible damage to soft tissue during the treatment period.

INDEPENDENT CLAIMS are also included for the following:

(I) a composition for whitening a tooth comprising at least 30 weight% 2 KHSO5 KHSO4 K2SO4 in a slurry or in a dry form that does not include a peroxide bleaching agent;

(II) whitening a tooth by:

(1) contacting the dental arch with the composition having pH = 4.5-8.5,

(2) removing the composition, from the arch,

(3) contacting it with another composition comprising a peroxide bleaching agent that generates at most 15 weight% hydrogen peroxide, and

(4) removing this composition; and

(III) a kit for whitening teeth comprising a compartmentalized carrier in close confinement of one or more containers, the first container containing the composition and an agent preferably **sodium phosphate** tripoly (Na5P3O10) to adjust pH to 5-8.5.

USE - Used to whiten tooth or an entire dental arch of any mammal, preferably human.

ADVANTAGE - The composition does not contain bleaching compound of the peroxide class or does not include a peroxide bleaching agent. It does

not cause visible damage, e.g., burning, necrosis, laceration, tissue stuff, bleeding to the soft tissue during the treatment period.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: **A12-V04B**; **D08-A**; **E10-A04B**; **E10-A09A**; **E31-C**;
E31-E; **E31-K06**; **E31-P03**; **E33**; **E34**; **E35-K02**

TECH UPTX: 20000531

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: The composition comprises **sodium phosphate** tripoly as a pH adjusting agent to adjust the pH of the slurry or aqueous solution prepared from dry form of the composition to 4.5-5.

Preferred Method: The treatment period is 5-10 (10-40) minutes. Steps (1) and (2) are repeated. Preferably only steps (1) and (2) are performed and (2) is by rinsing the dental arch with a rinsing solution.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The composition comprises:

(a) a peroxide bleaching agent that generates at most 15 wt.% hydrogen peroxide, especially hydrogen peroxide, urea peroxide, **sodium** percarbonate, **sodium** perborate, calcium hydroxide, **potassium** chlorate, magnesium carbonate or perhydrol urea, most preferably carbamide peroxide;

(b) a surfactant, especially **sodium lauryl sulfate**, Pluronic 127 (RTM: polyoxymers 407 or block co-polyol of ethylene oxide and propylene oxide), Tween 20 (RTM: polyoxyethylene sorbitan monolaurate), Surfynal 485 W (RTM: ethoxylated 2,4,7,9-tetramethyl 5 decyn-4,7-diol), Pemulan (RTM: acrylates 10-30 alkyl acrylate crosspolymer) or **sodium** dodecylbenzene sulfonate;

(c) a whitening enhancer, especially ammonium **persulfate**, **sodium persulfate** or **potassium persulfate**;

(d) an agent that decreases tooth sensitivity, especially **potassium nitrate**, citric acid or its salt, **sodium** fluoride, or strontium chloride;

(e) an optical brightener, especially Tinopal PT (RTM: CAS No. 16470-24-9), Eastobright (RTM: 2,2'-(1,2-ethenediyl) bis(4,1-phenylene) bisbenzoxazole) or Uvitex-OB (RTM: 2,5-bis(5-tert-butyl-2-benzoxazolyl) thiophene);

(f) a texturing agent, especially Carbopol (RTM: texturing agent, comprising copolymers of acrylic acid, etc., crosslinked with polyurelated monomers), carboxymethyl cellulose, hydroxyethyl cellulose, gumarabic, **sodium** polyacrylate, **potassium** polyacrylate, **silicon** dioxide, fumed **silicon** dioxide or alumina **silica**;

(g) a humectant, especially glycerine or propylene glycol;

(h) a material that enhances the energy conversion from one form to another, preferably light to heat, especially beta-carotene, phenothalein, guinea green, red aluminum lake, benzoin peroxide or titanium dioxide;

(i) an agent that protects the soft tissue, especially ascorbic acid, para amino benzoic acid, melatonin or aloe vera;

(j) a flavoring agent; and

(k) ozone.

ABEX UPTX: 20000531

EXAMPLE - A dry tooth whitening composition was prepared from Oxone (RTM: mixture of **potassium peroxydisulfate** (43 weight%), **potassium bisulfate** (23 weight%), **potassium sulfate** (29 weight%) and magnesium carbonate (2 weight%)) (1.5 g); fumed aluminum **silica** (0.05 g), Pemulan (RTM: acrylates and 10-30 C alkyl acrylate cross polymer, a high molecular weight

copolymer of acrylic acid and a long chain alkyl methacrylate crosslinked with polyalkenyl ethers of polyalcohols) (0.5 g), and a flavoring agent sufficient for a pleasant taste. Before using the composition water (6 ml) was added, pH adjusted to 7.5 using sodium phosphate tripoly (Na₅P₃O₁₀) and stirred (30 seconds).

One third of the wetted composition was placed into a custom fabricated outer layer of a dental tray and the tray was placed over a subject's teeth. Excess of the mixture if any was immediately removed. After 90 minutes the tray was removed. The whitening was equal to that obtained for 2-3 weeks of daily use of an over the counter tooth whitening paste.

L129 ANSWER 16 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2000-136824 [12] WPIX

DNC C2000-041910

TI Visually clear dentifrice gel.

DC A96 B07 D21 E34

IN DAY, T N

PA (PROC) PROCTER & GAMBLE CO

CYC 28

PI WO 9963960 A1 19991216 (200012)* EN 19 A61K007-16 <--

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: CA CN CZ HU MX PL RU SK US

EP 1085852 A1 20010328 (200118) EN A61K007-16 <--

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU NL PT SE

US 6479038 B1 20021112 (200278) A61K007-16 <--

CA 2334623 C 20040817 (200455) EN A61K007-16 <--

ADT WO 9963960 A1 WO 1999-US13011 19990611; EP 1085852 A1 EP

1999-927395 19990611, WO 1999-US13011 19990611; US 6479038

B1 WO 1999-US13011 19990611, US 2000-719269 20001208; CA 2334623

C CA 1999-2334623 19990611, WO 1999-US13011 19990611

FDT EP 1085852 A1 Based on WO 9963960; US 6479038 B1 Based on WO 9963960; CA

2334623 C Based on WO 9963960

PRAI GB 1998-12820 19980612

IC ICM A61K007-16

ICS A61K007-18

AB WO 9963960 A UPAB: 20000308

NOVELTY - A visually clear dentifrice gel comprises:

(1) tetrasodium pyrophosphate in an amount to

provide 0.2-5 % pyrophosphate anion;

(2) silica dental abrasive having a refractive index of

1.445-1.47;

(3) 0.7-3% sodium alkyl sulfate; and

(4) an aqueous liquid carrier.

DETAILED DESCRIPTION - A visually clear dentifrice gel comprises:

(1) tetrasodium pyrophosphate in an amount to

provide 0.2-5 % pyrophosphate anion;

(2) silica dental abrasive having a refractive index of

1.445-1.47;

(3) 0.7-3% sodium alkyl sulfate; and

(4) an aqueous liquid carrier.

An INDEPENDENT CLAIM is also included for the preparation of the dentifrice gel by adding anhydrous tetrasodium

pyrophosphate to an aqueous carrier, the gel comprising (2) from

above and an aqueous liquid carrier comprising less than 27% total water.

ACTIVITY - Anticalculus.

MECHANISM OF ACTION - None given.

USE - The virtually clear, dentifrice gel is useful for preventing tooth and gum diseases e.g. with anticalculus activity.

ADVANTAGE - The gel has good clarity, high anticalculus activity and

good foaming. The use of anhydrous **tetrasodium pyrophosphate** allows greater formulation flexibility at processing stage by freeing up water for the dissolution and/or hydration of other dentifrice components.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A12-V04A; B04-C03C; B05-A01B; B05-B02A1; B05-B02A3; **B05-B02C**
; B10-A07; B10-A09A; B10-E04C; B12-M02A; **B14-N06B**;
D08-B08; E10-A09A; E31-K06; **E31-P03**

TECH UPTX: 20000308

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Gel: The gel comprises less than 25% total water, has a pH of 7.5-10 (preferably 8-9.5) and a RDA of 50-200. The gel also comprises sorbitol as a primary humectant and glycerin, propylene glycol and/or polyethylene glycols of molecular weight less than 1500 as secondary humectant.

Preparation: The gel is prepared by adding anhydrous **tetrasodium pyrophosphate** (preferably after any thickening agents) to the aqueous carrier.

ABEX UPTX: 20000308

EXAMPLE - An anticalculus dentifrice gel of high clarity comprised (by weight %): water (3.6), sorbitol (70%; 51.12), glycerin (5.00), PEG-12 (5.00), thickening silica (4.44), hydrated silica (20.00), xanthan gum (0.50), **sodium alkyl sulfate** (28%; 5.00), **sodium hydroxide** (32%; 1.00), **sodium fluoride** (0.32), **sodium saccharin** (0.25), flavor oil (1.10), triclosan (0.28), pigmented silica (0.10) and anhydrous **tetrasodium pyrophosphate** (2.29).

L129 ANSWER 17 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-561825 [47] WPIX

DNC C1999-163756

TI Oral product for remineralizing teeth, used to build stronger, healthier teeth, used by consumers without intervention of dentists, activated upon use to deposit hydroxyapatite on teeth.

DC B05 B06 D21 E37

IN BARROW, S R; LEE, G J; WILLIAMS, D R; ZIEMKIEWICZ, A G; LEE, J

PA (BARR-I) BARROW S R; (UNIL) UNILEVER PLC; (CHEO) CHESEBROUGH PONDS USA CO
DIV CONOPCO INC; (UNIL) UNILEVER NV

CYC 85

PI WO 9947108 A1 19990923 (199947)* EN 31 A61K007-16 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD
GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG UZ VN YU ZW
AU 9933278 A 19991011 (200008) A61K007-16 <--
US 6120754 A 20000919 (200048) A61K007-16 <--
BR 9908701 A 20001121 (200065) A61K007-16 <--
EP 1061892 A1 20001227 (200102) EN A61K007-16 <--
R: DE ES FR GB IT
ZA 9901933 A 20001129 (200106) 29 A61K000-00
AU 730851 B 20010315 (200121) A61K007-16 <--
US 6214321 B1 20010410 (200122) A61K007-16 <--
CN 1292679 A 20010425 (200143) A61K007-16 <--
HU 2001001227 A2 20010828 (200157) A61K007-16 <--
MX 2000008245 A1 20010301 (200170) A61K007-16 <--
JP 2002506798 W 20020305 (200220) 29 A61K007-18 <--
EP 1061892 B1 20030813 (200355) EN A61K007-16 <--

R: DE ES FR GB IT

DE 69910359 E 20030918 (200369) A61K007-16 <--
 ES 2205798 T3 20040501 (200431) A61K007-16 <--

ADT WO 9947108 A1 WO 1999-EP1301 19990225; AU 9933278 A AU
 1999-33278 19990225; US 6120754 A Provisional US 1998-77627P
 19980311, US 1998-217094 19981221; BR 9908701 A BR
 1999-8701 19990225, WO 1999-EP1301 19990225; EP 1061892 A1
 EP 1999-914460 19990225, WO 1999-EP1301 19990225; ZA
 9901933 A ZA 1999-1933 19990310; AU 730851 B AU 1999-33278
 19990225; US 6214321 B1 Provisional US 1998-77627P 19980311
 , Div ex US 1998-217094 19981221, US 2000-538571 20000329; CN
 1292679 A CN 1999-803847 19990225; HU 2001001227 A2 WO
 1999-EP1301 19990225, HU 2001-1227 19990225; MX 2000008245
 A1 MX 2000-8245 20000823; JP 2002506798 W WO 1999-EP1301 19990225
 , JP 2000-536348 19990225; EP 1061892 B1 EP 1999-914460
 19990225, WO 1999-EP1301 19990225; DE 69910359 E DE
 1999-610359 19990225, EP 1999-914460 19990225, WO
 1999-EP1301 19990225; ES 2205798 T3 EP 1999-914460 19990225
 FDT AU 9933278 A Based on WO 9947108; BR 9908701 A Based on WO 9947108; EP
 1061892 A1 Based on WO 9947108; AU 730851 B Previous Publ. AU 9933278,
 Based on WO 9947108; HU 2001001227 A2 Based on WO 9947108; JP 2002506798 W
 Based on WO 9947108; EP 1061892 B1 Based on WO 9947108; DE 69910359 E
 Based on EP 1061892, Based on WO 9947108; ES 2205798 T3 Based on EP
 1061892

PRAI US 1998-77627P 19980311; US 1998-217094
 19981221; US 2000-538571 20000329

IC ICM A61K000-00; A61K007-16; A61K007-18
 ICS A61K007-18

AB WO 9947108 A UPAB: 19991116

NOVELTY - Oral product for remineralizing teeth.

DETAILED DESCRIPTION - Oral product comprises:

(1) 1st composition comprising 0.01-30 weight % water-soluble calcium
phosphate or monolithic combination of water-soluble calcium and
phosphate salts, with pH less than 7; and

(2) 2nd composition comprising 0.01-30 weight % alkaline material and
 anticaries effective amount of fluoride ion source, with pH greater than
 7, with (2) stored separately from (1) to avoid contact between
phosphate and alkaline material.

An INDEPENDENT CLAIM is also included for method of remineralizing
 tooth enamel.

ACTIVITY - Remineralizing; dental; anti-caries.

USE - Used to remineralize teeth and to provide anti-caries activity
 (claimed). Used to build stronger, healthier teeth.

ADVANTAGE - Can be used by consumers without intervention of
 dentists. Composition is activated upon use to deposit hydroxyapatite on
 the teeth. Do not require separation of calcium and **phosphate**
 ions prior to use.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B05-A01A; B05-A01B; B10-E02; B14-N06A; D08-B08;
 E31-E; E33-A03; E33-D; E34-D01; E34-D03

TECH UPTX: 19991116

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components:

Water-soluble **phosphate** salt is monocalcium hydrogen

phosphate. Alkaline material is sodium bicarbonate,

potassium bicarbonate, sodium hydroxide,

potassium hydroxide, sodium carbonate, **potassium**

carbonate, calcium carbonate and/or calcium hydroxide. pH of 1st

composition is 2.5-5.5, and preferably results from inclusion of hydrogen

peroxide, inorganic acid and/or 2-20C carboxylic acid. pH of 2nd composition is 7.2-11. Monolithic combination of water-soluble calcium and **phosphate** salts comprises calcium chloride, calcium **sulfate** or calcium acetate, with the respective **phosphates** salts chosen from **sodium phosphate**, ammonium **phosphate** and **sodium ammonium phosphate**.

Product further comprises 0.01-20 weight % triclosan. Product further comprises 0.01-20 weight % of zinc salt. Human enamel specimens were prepared to have artificial caries-like lesions. Initial surface hardness of the specimens was measured before initiation of treatment phase. Cyclic treatment regiment consisted of treatment, remineralization and demineralization phases over 21 days. Treatment products contained:

(1) dual-phase, **silica**-base, baking soda + peroxide toothpaste without fluoride;

(2) dual-phase, **silica**-base, baking soda + peroxide toothpaste with 1,000 ppm fluoride ions from **sodium fluoride**;

(3) **sodium fluoride**, dual-phase, **silica**-base, baking soda + peroxide toothpaste with 1,200 calcium ions, 8,000 ppm **phosphate** ions and 1,100 ppm fluoride ions; and

(4) **sodium fluoride**, dual-phase, **silica**-base, baking soda + peroxide toothpaste with 1,200 calcium ions, 8,000 ppm **phosphate** ions, 1,100 ppm fluoride ions and 6,000 ppm zinc (as zinc citrate).

At the end of the treatment regiment, the specimen surface hardness was remeasured. The change in Vickers Hardness numbers (delta VHN) indicated the degree of remineralisation provided by the test products. Delta VHN was as follows: (1) -6+/-2; (2) 22+/-2; (3) 30+/-3; and (4) 35+/-4. The results showed that the **sodium fluoride** formulation (2) was significantly better than the placebo without fluoride. Incorporation of calcium and **phosphate** significantly improved teeth hardness relative to the same system containing only **sodium fluoride**. An even greater improvement in hardness was seen by addition of zinc citrate.

ABEX UPTX: 19991116

ADMINISTRATION - Administration is oral (claimed). Compositions are used as toothpastes (claimed), gels, powders and mouthwashes.

EXAMPLE - Formulation comprises (1) gel containing (weight %): glycerin (40), Pluronic F-127 (RTM: polyoxyethylene-polyoxypropylene copolymer) (20), monocalcium **phosphate** monohydrate (5), hydrogen peroxide (35% active; 4.285), **phosphoric acid** (0.65), **tetrasodium pyrophosphate** (0.5), FDandC Blue Number 1 (0.01) and water (balance); and (2) paste containing (weight %): Polyol II (RTM: 70% sorbitol) (40.5), Syloid 63XX (RTM: hydrated **silica**) (15), **sodium bicarbonate** (10), Sylox 15X (RTM: hydrated **silica**) (6), polyethylene glycol 1450 (3), ethyl alcohol 38B (2.84), **sodium lauryl sulfate** (2.98), flavor (1.10), cellulose gum (0.8), **sodium saccharin** (0.54), menthol (0.5), **sodium fluoride** (0.44), titanium dioxide (0.3) and water (balance).

L129 ANSWER 18 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-561473 [47] WPIX

DNC C1999-163570

TI Two-part composition for treating dentin-related hypersensitivity.

DC A96 B05 B06 D21 E37

IN GALLI, G

PA (ITAL-N) ITALMED DI GALLI G E PACINI G SNC; (ITAL-N) ITALMED DI GALLI GIOVANNA & PACINI GIGLI; (ITAL-N) ITALMED DI GALLI G & PACINI G SNC; (GALL-I) GALLI G

CYC 83

PI WO 9944570 A1 19990910 (199947)* EN 22 A61K007-16 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
 GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG
 MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
 US UZ VN YU

AU 9888524 A 19990920 (200007) A61K007-16 <--
 NO 2000004423 A 20000925 (200063) A61K000-00
 BR 9815710 A 20001114 (200064) A61K007-16 <--
 EP 1058535 A1 20001213 (200066) EN A61K007-16 <--
 R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT RO SE
 CZ 2000003245 A3 20010117 (200107) A61K007-16 <--
 SK 2000001325 A3 20010212 (200112) A61K007-16 <--
 CN 1286623 A 20010307 (200140) A61K007-16 <--
 HU 2001001016 A2 20010828 (200157) A61K007-16 <--
 KR 2001041671 A 20010525 (200168) A61K007-16 <--
 IT 1300634 B 20000523 (200207) A61K000-00
 JP 2002505261 W 20020219 (200216) 22 A61K006-00
 AU 750735 B 20020725 (200260) A61K007-16 <--
 EP 1058535 B1 20030423 (200329) EN A61K007-16 <--
 R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT RO SE
 DE 69813906 E 20030528 (200343) A61K007-16 <--
 MX 2000008697 A1 20020301 (200362) A61K007-16 <--
 US 2003194381 A1 20031016 (200369) A61K007-16 <--
 ES 2197497 T3 20040101 (200412) A61K007-16 <--
 US 6689341 B2 20040210 (200413) A61K007-16 <--
 CZ 294068 B6 20040915 (200462) A61K007-16 <--

ADT WO 9944570 A1 WO 1998-EP2963 19980520; AU 9888524 A AU
 1998-88524 19980520; NO 2000004423 A WO 1998-EP2963 19980520
 , NO 2000-4423 20000905; BR 9815710 A BR 1998-15710 19980520,
 WO 1998-EP2963 19980520; EP 1058535 A1 EP 1998-940073
 19980520, WO 1998-EP2963 19980520; CZ 2000003245 A3 WO
 1998-EP2963 19980520, CZ 2000-3245 19980520; SK 2000001325
 A3 WO 1998-EP2963 19980520, SK 2000-1325 19980520; CN
 1286623 A CN 1998-813853 19980520; HU 2001001016 A2 WO
 1998-EP2963 19980520, HU 2001-1016 19980520; KR 2001041671
 A KR 2000-709879 20000906; IT 1300634 B IT 1998-FI51 19980306;
 JP 2002505261 W WO 1998-EP2963 19980520, JP 2000-534174
 19980520; AU 750735 B AU 1998-88524 19980520; EP 1058535 B1
 EP 1998-940073 19980520, WO 1998-EP2963 19980520; DE
 69813906 E DE 1998-613906 19980520, EP 1998-940073
 19980520, WO 1998-EP2963 19980520; MX 2000008697 A1 WO
 1998-EP2963 19980520, MX 2000-8697 20000905; US 2003194381 A1 WO
 1998-EP2963 19980520, US 2000-623578 20000906; ES 2197497 T3 EP
 1998-940073 19980520; US 6689341 B2 WO 1998-EP2963 19980520
 , US 2000-623578 20000906; CZ 294068 B6 WO 1998-EP2963 19980520,
 CZ 2000-3245 19980520

FDT AU 9888524 A Based on WO 9944570; BR 9815710 A Based on WO 9944570; EP
 1058535 A1 Based on WO 9944570; CZ 2000003245 A3 Based on WO 9944570; HU
 2001001016 A2 Based on WO 9944570; JP 2002505261 W Based on WO 9944570; AU
 750735 B Previous Publ. AU 9888524, Based on WO 9944570; EP 1058535 B1
 Based on WO 9944570; DE 69813906 E Based on EP 1058535, Based on WO
 9944570; MX 2000008697 A1 Based on WO 9944570; ES 2197497 T3 Based on EP
 1058535; US 6689341 B2 Based on WO 9944570; CZ 294068 B6 Previous Publ. CZ
 2000003245, Based on WO 9944570

PRAI IT 1998-FI51 19980306

IC ICM A61K000-00; A61K006-00

ICS A61C000-00; A61K006-02; A61K007-18; A61P001-02

ICA A61K007-16

AB WO 9944570 A UPAB: 19991116

NOVELTY - A two-part composition for treating dentin-related hypersensitivity by forming crystalline complexes on the surface on the tooth and depolarizing soluble **potassium** salts within the dentinal tubules when applied and mixed locally is new.

DETAILED DESCRIPTION - A dental composition for desensitizing exposed dentin comprises liquids or gels that can be topically mixed where the first solution/gel comprises solutes of **potassium phosphate** and at least one other **potassium** salt; and the second solution/gel comprises solutes of a calcium salt and at least one from a strontium, silver, barium or zinc salts. An INDEPENDENT CLAIM is included for a method of making the above composition by preparing each solution/gel separately (the second solution/gel containing chloride or acetate) and then mixing them topically to form a crystalline complex of salts that obliterate the dentinal tubules and depolarize the dentin.

ACTIVITY - Dental desensitizer.

MECHANISM OF ACTION - The insoluble crystals obliterate exposed dentinal tubules; soluble **potassium** salts depolarize the dentin.

USE - Used to treat hypersensitivity associated with exposed dentinal tubules including deep cavities, dental layer deficit and the treatment of stumps prior to fitting a dental prostheses.

ADVANTAGE - The insoluble salts that obliterate the dentinal tubules are long lasting and seal in the depolarizing **potassium** salts that are water soluble; thus giving a dual action. Present treatments are single action and are of only limited duration.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A12-V03C1; B04-C02A2; B04-C02A3; B05-A01A; B05-A01B; B05-A03A; B05-A03B; B05-B02C; B05-C04; B05-C07; B10-A09B; B10-A09C; B10-E04C; B12-M02A; B12-M03; B12-M07; B14-C01; B14-N06; B14-N06B; D08-A; E31-K05D; E33-B; E33-D; E34-D02

TECH UPTX: 19991116

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: The first part of the composition comprises **potassium phosphate** and at least one from **potassium** carbonate or **potassium** fluoride. The second part contains calcium chloride and strontium chloride.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The composition optionally comprises bacteriostatic preservatives (preferably **sodium** methylparaben or **sodium** benzoate, and a solvent (preferably deionized water). A most preferred composition comprises: (A) in wt.% **potassium phosphate** (8), **potassium** carbonate (3.5), **potassium** fluoride (0.4), sorbitol (30), colloidal **silica** (15), glycerol (5), **lauryl sulfate sodium** (1.5), carboxymethylhydroxyethyl cellulose (1), **sodium** benzoate (0.5), **sodium** saccharin (0.4), mint fragrance, colouring (CI 42051; CI 19140) and purified water (to make 100 ml); and (B) in wt.% calcium chloride (7), strontium chloride (6), sorbitol (30), colloidal (15), glycerol (5), **lauryl sulfate sodium** (1.5), carboxymethylhydroxyethyl cellulose (1), **sodium** benzoate (0.5), **sodium** saccharin (0.4), mint fragrance, coloring (CI 16255; CI 47005) and purified water (to make 100 ml).

ABEX UPTX: 19991116

SPECIFIC COMPOUNDS - **Potassium phosphate** and 10 other soluble salts are specifically claimed.

ADMINISTRATION - Applied as a two-part system of liquids, gels or dentifrices to the dental surface. Dosage is not specified.

EXAMPLE - A two-part dentifrice composition comprising (A) and (B) was used as a desensitizing treatment as follows. A 2-pea sized amount of (A) is paced on a toothbrush and is brushed into the teeth for 2 minutes; the friction is prolonged in the hypersensitive regions. Without rinsing a similar amount of (B) is brushed into the teeth likewise. On mixing, a crystal complex comprising 6 six insoluble salts (phosphates, carbonates and fluorides of calcium and strontium) and potassium chloride was formed. The mouth was then rinsed.

L129 ANSWER 19 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1999-494203 [41] WPIX
 DNC C1999-144819
 TI Transparent gel, oral care composition containing an alkali metal bicarbonate used for teeth whitening.
 DC A96 B05 D21 E34 E36
 IN SILVEIRA RAMOS ALMEIDA, R; RAMOS ALMEIDA, R S
 PA (ALME-I) RAMOS ALMEIDA R S; (UNIL) UNILEVER NV; (UNIL) UNILEVER PLC
 CYC 83
 PI WO 9939685 A2 19990812 (199941)* EN 12 A61K007-16 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD
 GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
 MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
 UA UG UZ VN YU ZW
 AU 9924226 A 19990823 (200005) <--
 BR 9800802 A 20000502 (200033) A61K007-16 <--
 EP 1052966 A2 20001122 (200061) EN A61K007-16 <--
 R: DE ES FR GB IT
 CN 1290159 A 20010404 (200140) A61K007-16 <--
 MX 2000006884 A1 20010101 (200166) A61K007-16 <--
 EP 1052966 B1 20020313 (200219) EN A61K007-16 <--
 R: DE ES FR GB IT
 DE 69901022 E 20020418 (200234) A61K007-16 <--
 ES 2172980 T3 20021001 (200275) A61K007-16 <--
 ADT WO 9939685 A2 WO 1999-EP319 19990119; AU 9924226 A AU
 1999-24226 19990119; BR 9800802 A BR 1998-802 19980302; EP
 1052966 A2 EP 1999-903650 19990119, WO 1999-EP319
 19990119; CN 1290159 A CN 1999-802686 19990119; MX
 2000006884 A1 MX 2000-6884 20000713; EP 1052966 B1 EP 1999-903650
 19990119, WO 1999-EP319 19990119; DE 69901022 E DE
 1999-601022 19990119, EP 1999-903650 19990119, WO
 1999-EP319 19990119; ES 2172980 T3 EP 1999-903650 19990119
 FDT AU 9924226 A Based on WO 9939685; EP 1052966 A2 Based on WO 9939685; EP
 1052966 B1 Based on WO 9939685; DE 69901022 E Based on EP 1052966, Based
 on WO 9939685; ES 2172980 T3 Based on EP 1052966
 PRAI EP 1998-200343 19980205
 IC ICM A61K007-16
 AB WO 9939685 A UPAB: 19991011
 NOVELTY - An oral care composition in transparent gel form containing an
 alkali metal bicarbonate source.
 DETAILED DESCRIPTION - An oral care composition in the form of a
 transparent gel, comprises a thickening silica, an abrasive
 silica with a refractive index of 1.47 or below in a
 polyol-humectant-containing liquid vehicle and 0.5-5% by weight of an
 alkali metal bicarbonate source.

ACTIVITY - The bicarbonate functions as a mild abrasive agent.

USE - The transparent gel composition is used in oral care. It has a teeth-whitening effect, reduces oral malodor and neutralizes acid formed in the oral cavity by microbial decomposition of sugar.

ADVANTAGE - The low level of bicarbonate included does not jeopardize the transparency of the gel.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A12-V04B; B04-C02A2; B04-C03C; B05-A01B; B14-N05;

B14-N06A; D08-A; D08-B08; E33-D

TECH UPTX: 19991105

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Compositions: The alkali metal bicarbonate source can be **sodium** or **potassium** bicarbonate or sesquicarbonate or mixtures thereof, but is preferably **NaHCO₃** and is preferably present in an amount 1-2% by weight. The composition may contain a coloring agent and the product may be dispensed from a single or multiple compartment container in the case of compositions with different colors. A preferred form is a dual composition each composition having a different color. The composition may comprise further optional ingredients e.g. binders, solubilizing agents, **surface-active** agents, sweetening agents, anticaries agents, preservatives, antibacterials, anti-plaque agents, plant extracts, bleaching agents or plaque buffers.

ABEX UPTX: 19991105

EXAMPLE - Clarity studies were carried out with a formulation comprising different levels of **NaHCO₃** (1%, 5% and 10%). Samples of the formulation were put in a cuvette and the cuvette was placed on an illuminated platform, and a transparency scale ranging from -12 to +13 was placed behind the cuvette. The scale was slid behind the cuvette and reading was taken when the characters on the scale became clearly readable. The formulation used was as follows: 7% by weight of abrasive **silica** (according to EP 535943 and EP 666832), 2% abrasive **silica** (according to EP 236070), 8% thickening **silica**, 60% sorbitol (70%), 0.5% **Na** carboxymethylcellulose, 0.1% **trisodium orthophosphate**, 5% polyethylene glycol (MW 1500), 1.5% **Na laurylsulfate**, 1.5% flavor, 0.1% saccharin, 0.01% pigment blue, 0.6% **Na monofluorophosphate**, **NaHCO₃** (at 1,5 or 10%), 0.1% preservative and water up to 100%. The following results were obtained: 1% **NaHCO₃** gave a scale reading of 0 to +4; 5% **NaHCO₃** gave a scale reading of -9 to -12; and 10% **NaHCO₃** gave a scale reading of -9 to -12.

L129 ANSWER 20 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-478631 [40] WPIX

DNC C1999-140730

TI Inhibition of dental plaque with toothpaste or mouthrise.

DC B05 B06 D21 E19

IN BERRY, G; MICHAEL, D W; UPSON, J G

PA (PROC) PROCTER & GAMBLE CO

CYC 1

PI US 5939080 A 19990817 (199940)* 7 A61K006-00 <--

ADT US 5939080 A US 1997-781222 19970110

PRAI US 1997-781222 19970110

IC ICM A61K006-00

ICS A61K007-00; A61K007-16

AB US 5939080 A UPAB: 19991004

NOVELTY - Dental plaque formation is inhibited by applying a non-ingestible composition to the teeth in the form of a toothpaste or mouthrinse comprising plaque-inhibiting hydrophobic solvents, nonpolymeric

surfactants and an aqueous carrier.

DETAILED DESCRIPTION - Dental plaque formation is inhibited by applying a non-ingestible composition to the teeth in the form of a toothpaste or mouthrinse having a pH of 5.0-9.5 and comprising:

(a) one or more plaque-inhibiting hydrophobic solvents having a hydrogen bonding parameter of less than 7.0 and/or a water-solubility of less than 10%;

(b) one or more nonpolymeric **surfactants**; and

(c) an aqueous carrier, where the (a):(b) weight ratio is 30:1 to 1:2.

ACTIVITY - Anti-plaque.

MECHANISM OF ACTION - None given.

USE - The composition is used for inhibiting plaque formation, and subsequent calculus formation, on the teeth of humans or other animals.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B05-A01A; B05-A01B; B05-A02; B05-B02A3; B05-C07; B10-C02; B10-C04B; B12-M09; B14-N06A; D08-B08; E10-A09A; E10-A22D; E10-E04M1; E10-F02A3; E10-G02G2; E10-G02H2

TECH UPTX: 19991004

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The hydrophobic solvent is present in an amount of 0.5-90% and is selected from triacetin, diethyl malate, diethyl succinate, benzyl alcohol, phenylethyl alcohol, ethyl acetate, diethyl sebacate, ethyl acetoacetate, diethyl tartrate, butyl lactate and ethyl lactate.

The nonpolymeric **surfactants** are each present in an amount of 0.25-12% and are selected from anionic **surfactants**, select nonionic **surfactants**, amphoteric **surfactants**, zwitterionic **surfactants** and cationic **surfactants**.

The composition also contains a fluoride ion source that is capable of providing from 50 ppm to 3500 ppm of free fluoride ions and is selected from sodium fluoride, stannous fluoride, **sodium monofluorophosphate** and **potassium fluoride**.

ABEX UPTX: 19991004

EXAMPLE - A toothpaste comprises (weight%): sorbitol (40.767), glycerol (15), water (12.34), **sodium fluoride** (0.243), **sodium saccharin** (0.4), **monosodium phosphate** (0.5), **trisodium phosphate** (1.5), xanthan gum (0.4), Carbopol (0.3), titanium dioxide (0.5), solor solution (0.5), **silica** (20), diethyl succinate (3), **sodium alkyl sulfate** (4) and flavor (1).

L129 ANSWER 21 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-468383 [39] WPIX

DNC C1999-137276

TI Dental formulation used to treat hypersensitive teeth.

DC B05 D21

IN ALFANO, M C; LEIGHT, R S; SMETANA, A J; SYNODIS, J D; YEH, K

PA (BLOC) BLOCK DRUG CO

CYC 1

PI US 5939048 A 19990817 (199939)* 6 A61K007-16 <--

ADT US 5939048 A Cont of US 1994-309134 19940920, US 1996-674797 19960703

PRAI US 1994-309134 19940920; US 1996-674797 19960703

IC ICM A61K007-16

ICS A61K033-10

AB US 5939048 A UPAB: 19990928

NOVELTY - Formulation for treating dental hypersensitivity comprises a

desensitizing salt, and **sodium** bicarbonate for masking taste.

DETAILED DESCRIPTION - Formulation for treating dental hypersensitivity comprises:

(a) a desensitizing salt; and

(b) **sodium** bicarbonate for masking taste.

The weight ratio of (a) to (b) is 1:1 to 1:8. The desensitizing salt is **potassium** nitrate. The formulation is in the form of an aqueous solution, a mouthwash or a dentifrice.

USE - The formulation is used to treat hypersensitive teeth (claimed).

ADVANTAGE - The formulation has an improved flavor profile as compared to prior art.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B05-A01A; B05-A01B; B05-C02; B05-C04; B05-C07; B05-C08; B10-C02; B10-C04E; B12-M02A; **B14-N06A; D08-A05**

TECH UPTX: 19990928

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: When the formulation is an aqueous solution, the desensitizing salt comprises 0.07-25 (preferably 1-20, especially 10) wt. % of the formulation. When the formulation is a mouthwash, the desensitizing salt comprises 0.2-5 wt. % of the formulation. When the formulation is an aqueous solution, the desensitizing salt comprises 0.5-20 (preferably 5) wt. % of the formulation.

The ratio of (a) to (b) is 1:1-1:5 (preferably 1:3).

ABEX UPTX: 19990928

WIDER DISCLOSURE - Disclosed are formulations as above, which may also be in the form of a chewing gum, a lozenge or an aerosol spray. The desensitizing salt is selected from strontium chloride, **potassium** chloride, **potassium** nitrate, **potassium** oxalate, **potassium** citrate, **potassium** bicarbonate, strontium chloride (sic), or strontium acetate.

ADMINISTRATION - The formulation is applied directly to an affected tooth.

EXAMPLE - A typical toothpaste formulation was prepared comprising (weight %): **potassium** nitrate (5.00); **sodium** saccharin (0.35); **sodium** fluoride (0.243); **sodium** bicarbonate (25.0); hydrated silica (10.0); titanium oxide (0.5); fumed silica (0.4); humectant (24.00); hydroxyethylcellulose (1.2); **sodium** lauryl sulfate (1.50); flavor (1.3); methyl paraben (0.05); propyl paraben (0.05); and purified water (to 100).

Thirty panelists were asked to compare the above toothpaste (test) with 'Arm and Hammer' (RTM) toothpaste with baking soda (control), for a number of different attributes, on a scale of 1-9 (1 is low and 9 is high). Results were as follows: for appearance the test formulation scored 4.1, while the control scored 5.6; for taste the test formulation scored 5.1, while the control scored 4.7; for flavor intensity the test formulation scored 5.0, while the control scored 5.2; for consistency the test formulation scored 4.1, while the control scored 3.9; for foaming the test formulation scored 3.7, while the control scored 3.3; for aftertaste the test formulation scored 5.4, while the control scored 5.2; and overall the test formulation scored 5.0, while the control scored 4.1.

L129 ANSWER 22 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-405355 [34] WPIX

DNC C1999-119675

TI Toothpaste tablet for cleaning teeth without brushing.

DC B07 D21
 IN D'SOUZA, S V; GOEL, V; LUHADIYA, A P
 PA (PROC) PROCTER & GAMBLE CO
 CYC 81
 PI WO 9933437 A1 19990708 (199934)* EN 20 A61K007-16 <--
 RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA
 PT SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
 GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG
 MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
 US UZ VN YU ZW
 AU 9857257 A 19990719 (199951) A61K007-16 <--
 ADT WO 9933437 A1 WO 1997-US24121 19971229; AU 9857257 A WO
 1997-US24121 19971229, AU 1998-57257 19971229
 FDT AU 9857257 A Based on WO 9933437
 PRAI WO 1997-US24121 19971229
 IC ICM A61K007-16
 AB WO 9933437 A UPAB: 19990825
 NOVELTY - Toothpaste tablet comprises polishing agent, thickening agent
 and tableting agent.
 DETAILED DESCRIPTION - Tooth paste tablet comprises
 (a) 20-80 weight% polishing agent;
 (b) 0.2-5.5 weight% thickening agent; and
 (c) 30-80 weight% tableting agent.
 An INDEPENDENT CLAIM is also included for a method of cleaning teeth
 by putting the above tablet into the mouth. The tablet dissolves and
 changes into a liquid when contacted with saliva and/or water.
 USE - As a toothpaste that can be used to clean teeth without
 brushing e.g. by distributing the dissolved tablet around inside the
 mouth, such as by moving the tongue over the surface of the teeth or by
 swirling throughout the mouth.
 ADVANTAGE - The tablets provide better cost effectiveness for
 manufacturing and shipment than pastes, which dent or deform in laminate
 tubes. The tablets also have improved stability due to the low water
 content and readily form liquids in the mouth without the need for
 chewing.
 Dwg.0/0
 FS CPI
 FA AB; DCN
 MC CPI: B04-C02B; B05-A01B; B10-A07; B12-M11B; B14-N06A;
 D08-A05
 TECH UPTX: 19990825
 TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Toothpaste: The tablet
 comprises sugar and/or sugar alcohol (preferably in an amount of 5-50% and
 5-60% respectively) as carrier, an anticaries, anticalculus, antimicrobial
 and/or antiinflammatory agent as therapeutic agent and a
surfactant, an effervescent agent (preferably an effervescent salt
 derived from a carbonate source and an acidic source), a humectant, a
 tableting aid, a sweetening agent, a flavoring agent, a coloring agent, a
 preservative, a cooling agent and/or a buffering agent as oral carrier.
 ABEX UPTX: 19990825
 EXAMPLE - A tooth paste comprised (by wt%): mannitol (47.00), calcium
 carbonate (27.00), pregel starch (0.5), aspartame (0.35), FD and C Blue 1
 (0.01), **sodium** fluoride (0.24), flavor (1.10), **sodium**
alkyl sulfate (1.00), **potassium** citrate
 (2.10), xanthan gum (2.85), titanium dioxide (0.50), **sodium**
 carboxymethyl cellulose (2.65), synthetic **silicate** (0.20),
 sucrose (10.00), magnesium stearate (2.50) and talc (2.00). The tablet
 readily forms a liquid in the mouth without needing to chew the tablet and
 cleans teeth without brushing.

L129 ANSWER 23 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1999-302520 [25] WPIX
 DNC C1999-088677
 TI Mid-chain branched **surfactants** with **potassium** ions.
 DC A11 A97 D21 D25 E19
 IN KATSUDA, R
 PA (PROC) PROCTER & GAMBLE CO; (PROC) PROCTER & GAMBLE CELLULOSE CO
 CYC 80
 PI WO 9919443 A1 19990422 (199925)* EN 119 C11D003-22 <--
 RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT
 SD SE SZ UG ZW
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
 GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
 MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ
 VN YU
 AU 9749053 A 19990503 (199937) <--
 EP 1021508 A1 20000726 (200037) EN C11D003-22 <--
 R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE
 JP 2000513044 W 20001003 (200052) 147 C11D001-14 <--
 BR 9714874 A 20001003 (200053) C11D003-22 <--
 CN 1276822 A 20001213 (200123) C11D003-22 <--
 ADT WO 9919443 A1 WO 1997-US18690 19971010; AU 9749053 A AU
 1997-49053 19971010, WO 1997-US18690 19971010; EP 1021508
 A1 EP 1997-911752 19971010, WO 1997-US18690 19971010;
 JP 2000513044 W WO 1997-US18690 19971010, JP 1999-500624
 19971010; BR 9714874 A BR 1997-14874 19971010, WO
 1997-US18690 19971010; CN 1276822 A CN 1997-182477 19971010
 , WO 1997-US18690 19971010
 FDT AU 9749053 A Based on WO 9919443; EP 1021508 A1 Based on WO 9919443; JP
 2000513044 W Based on WO 9919443; BR 9714874 A Based on WO 9919443
 PRAI WO 1997-US18690 19971010
 IC ICM C11D001-14; C11D003-22
 ICS C11D001-00; C11D003-04; C11D003-06
 AB WO 9919443 A UPAB: 20011203
 NOVELTY - Detergent compositions containing adjunct ingredients containing
potassium ions in combination with long chain alkyl, mid-chain
 branched **surfactant** compounds provide greater surfactancy at
 lower use temperatures, improved removal of greasy and body soils from
 fabrics and other benefits.
 DETAILED DESCRIPTION - A detergent composition comprises:-
 (a) at least 0.5wt.% of a longer alkyl chain, mid-chain branched
surfactant compound of formula (I); and
 (b) 0.05-20wt.% **potassium** ions.
 Ab = 9-22 (especially 12-18)C hydrophobic mid-chain branched alkyl
 having: (i) longest linear C chain attached to the -X-B moiety having
 8-21C atoms; (ii) 1-3C alkyl moiety(ies) branching from the longest chain;
 (iii) at least one of the branching alkyl attached directly to a C atom of
 the longest linear C chain at a position within the range of 2C, counting
 from carbon 1 which is attached to the -X-B moiety, to position terminal
 minus 2 C; and (iv) the composition has an average total number of C atoms
 in the Ab-X moiety of 14.5-18 (especially 14.5-17.5, more especially
 15-17);
 B = hydrophilic moiety selected from **sulfates**, **sulfonates**,
amine oxides, **polyoxyalkylene**, especially **polyoxyethylene/polyoxypropylene**
, alkoxylated sulfates, **polyhydroxy moieties**, **phosphate**
esters, **glycerol sulfonates**, **polygluconates**, **polyphosphate**
esters, **phosphonates**, **sulfosuccinates**, **sulfosuccimates**,
polyalkoxylated carboxylates, **glucamides**, **taurimates**,
sarcosimates, **glycinates**, **isethionates**, **mono/dialkanolamides**,

monoalkanolamide **sulfates**, diglycolamides, diglycolamide **sulfates**, glycerol esters, glycerol ester **sulfates**, glycerol ethers, glycerol ether **sulfates**, polyglycerol ethers, polyglycerol ether **sulfates**, **sorbitan** esters, polyalkoxylated **sorbitan** esters, **ammonioalkanesulfonates**, amidopropyl **betaines**, alkylated **quats**, alkylated/polyhydroxyalkylated **quats**, alkylated/polyhydroxyalkylated oxypropyl **quats**, imidazolines, 2-yl-succinates, sulfonated alkyl esters and sulfonated **fatty acids**;

X = -CH₂- and -C(O)-.

USE - The compositions are useful for laundering fabrics, washing dishes and hard surfaces and in personal cleansing applications.

ADVANTAGE - The **potassium** ions in combination with long chain alkyl, mid-chain branched **surfactant** compounds provide greater surfactancy at low temperatures, improved removal of greasy or body soils from fabrics, improved compatibility with detergent enzymes and/or whiteness maintenance benefits.

FS CPI

FA AB; GI; DCN

MC CPI: A10-E01; A12-W12A; D08-B09A; D11-B22; D11-D01A;

D11-D01F; E31-K01; E31-P05C; E33-A03;

E33-B; E33-C; E33-D

TECH UPTX: 19990630

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred composition: The composition comprises at least 5wt.% of compound (I) and 0.5-15wt.% of **potassium** ions included in **potassium** salts or at least 10wt.% of compound (I) and 1-10wt.% of **potassium** ions included in **potassium** salts. The **potassium** ions are included in **potassium** salts selected from **potassium** salt of carbonates/**silicates** and/or mid-chain branched **surfactants**. The composition also comprises adjunct ingredients selected from **surfactants**, builders, alkalinity system, organic **polymeric** compounds, suds suppressors, soil suspension and anti-redeposition agents and/or corrosion inhibitors. Preferred Preparation Process: The mid-chain branched primary alkyl **sulfates** are prepared by e.g. by converting an alkyl halide to a Grignard reagent which is reacted with a haloketone. After conventional acid hydrolysis, acetylation and thermal elimination of acetic acid, an intermediate olefin is produced which is hydrogenated immediately using standard hydrogenation catalysts such as Pd/C.

ABEX

UPTX: 19990630

SPECIFIC COMPOUNDS - The **potassium** ions are included in **potassium** salts selected from **potassium** chloride, **potassium** hydroxide, **potassium** carbonate, **potassium** sulfate, tetra, tri, di and **monopotassium** pyrophosphate, penta, tetra, tri, di and **monopotassium** tripolyphosphate, and **potassium** silicate.

EXAMPLE - A detergent composition comprised (weight%): Mid-chain branched primary alkyl **sulfate** **sodium** salt (average number of carbons = 16.5) (22), branched primary alcohol condensed with 6.5 molecules of ethylene oxide (1.5), Na zeolite A (27.8), polyacrylic acid (2.3), **Potassium** carbonate (10), **sodium** silicate (0.6), perborate (1.0), protease (0.3), Carezyme (RTM: Cellulase) (0.3), sulfobenzyl end-capped esters with oxyethylene oxy and terephthaloyl backbone (0.4), brightener (0.2), polyethylene glycol (1.6), **sulfate** (5.5), **silicone** antifoam (0.42) and balance to 100. The total **potassium** ions in the composition is 5.5 weight%.

DEFINITIONS - Ab moiety is a branched primary alkyl moiety of formula (II)
 R, R1 and R2 = 1-3C alkyl (especially Me) and H and R, R1 and R2 are not all H;

w, x, y, z = 0-13 and w + x = y = z = 7-13.

The total number of C atoms in the branched primary alkyl moiety including R, R1, and R2 is 13-19.

Alternatively Ab moiety is branched primary alkyl moiety of formula (III) or (IV)

a, b, d, and e = integers;

a + b = 10-16

d + e = 8-14

When a + b = 10, a is an integer from 2-9 and b is an integer from 1-8;

when a + b = 11, a is an integer from 2-10 and b is an integer from 1-9;

when a + b = 12, a is an integer from 2-11 and b is an integer from 1-10;

when a + b = 13, a is an integer from 2-12 and b is an integer from 1-11;

when a + b = 14, a is an integer from 2-13 and b is an integer from 1-12;

when a + b = 15, a is an integer from 2-14 and b is an integer from 1-13;

when a + b = 16, a is an integer from 2-15 and b is an integer from 1-14;

when d + e = 8, d is an integer from 2-7 and e is an integer from 1-6;

when d + e = 9, d is an integer from 2-8 and e is an integer from 1-7;

when d + e = 10, d is an integer from 2-9 and e is an integer from 1-8;

when d + e = 11, d is an integer from 2-10 and e is an integer from 1-9;

when d + e = 12, d is an integer from 2-11 and e is an integer from 1-10;

when d + e = 13, d is an integer from 2-9 and e is an integer from 1-11;

when d + e = 14, d is an integer from 2-9 and e is an integer from 1-12;

L129 ANSWER 24 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-302017 [25] WPIX

DNC C1999-088479

TI Dental product for the treatment and prevention of periodontal diseases.

DC A25 A96 B04 B05 D21 E19

IN CUTLER, E T

PA (SQUI-N) SQUIGLE INC

CYC 1

PI US 5900230 A 19990504 (199925)* 7 A61K007-16 <--

ADT US 5900230 A US 1997-912502 19970818

PRAI US 1997-912502 19970818

IC ICM A61K007-16

ICS A61K007-18; A61K009-20; A61K009-68

AB US 5900230 A UPAB: 20011211

NOVELTY - Dental product for the treatment and prevention of periodontal diseases comprises a poloxamer or poloxamer congener **surfactant** and xylitol.

DETAILED DESCRIPTION - Dental product for the treatment and prevention of periodontal diseases comprises:

(a) at least 0.01 weight % of a poloxamer or poloxamer congener **surfactant**; and

(b) at least 10 weight % xylitol.

The dental product is free from:

(i) irritating detergents, including **sodium lauryl sulfate** and **sodium N-lauroyl sarcosinate**;

(ii) irritating flavors and essential oils, including phenol, thymol, carvacrol, and eucalyptol; and

(iii) irritating antimicrobials, including chlorhexidine, alexidine, cetylpyridinium chloride, benzalkonium chloride, benzethonium chloride, sanguinarine and triclosan.

ACTIVITY - Antiinflammatory; periodontal; antiplaque; antitartar.

MECHANISM OF ACTION - The product stabilizes cell membranes of the oral mucosa.

USE - The product is used to treat and prevent periodontal disease.

ADVANTAGE - The mixture of xylitol and poloxamer has synergistic activity. The product contains no irritants, encouraging improved patient compliance.

FS CPI

FA AB; DCN

MC CPI: **A12-V01**; **A12-V04B**; B04-C02A; B04-C03; B05-A01A; B05-A01B; B05-B02A3; B05-C05; B05-C07; B06-A01; B06-D01; B06-F01; B07-A02A; B07-A02B; B07-D03; B07-G; B10-A07; B10-B01B; B10-B02E; B10-C03; B10-C04E; B10-E04C; B10-F02; B10-J02; B12-M02A; **B14-N06**; B14-S09; **D08-A05**; E05-A; E05-B01; E06-A01; E06-D01; E06-F01; E07-A02B; E07-A02D; E07-A02H; E07-D03; E07-G; E10-A07; E10-B01C; E10-B01D; E10-B02D5; E10-C03; E10-C04H; E10-E04H; E10-E04J; E10-F02A2; E10-J02A2; E31-F05; E31-K01; E31-K07; **E33-B**; E34-C02; E34-D03

TECH UPTX: 19990630

TECHNOLOGY FOCUS - **POLYMERS** - Preferred Components: The poloxamer consists of a block **copolymer** of ethylene oxide (EO) and propylene oxide (PO), having an arrangement of formula (I).
(EO)_a(PO)_b(EO)_a (I)

a and b = not more than 200.

The molecular weight (MR) of (I) is 1000-30000. Preferably the poloxamer is meroxapol, and is dispersible or soluble in water.

Alternatively the poloxamer congener is a trimethylolpropane block **copolymerized** with EO and the PO (or vice versa), where each of the three branches contains not more than 200 EO groups, and not more than 200 PO groups, preferably the poloxamer congener is poloxamine.

Alternatively the poloxamer congener is made by **copolymerizing** at least 2 alkylene oxides, selected from EO, PO or RO, where RO is any 1-10C alkylene oxide, to an alkane (sic) having 1-10 reactive substituent selected from SH, NH₂, RNH (sic), OH or X, where X is any other functional group capable of being alkylated by an alkylene oxide. The total number of **copolymerized** branches is at least 2.

The product may further contain an anionic polysaccharide and/or a non-ionic cellulose ether. The anionic polysaccharide is selected from alginic acid, gum arabic, carrageenan, carboxymethyl cellulose, karaya gum, pectin, gum tragacanth, and xanthan gum. The non-ionic cellulose ether is selected from methyl cellulose, ethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, and hydroxypropylmethyl cellulose.

TECHNOLOGY FOCUS - **PHARMACEUTICALS** - Preferred Product: The dental product is in a form selected from dentifrice powders, granules, disintegrable tablets, dentifrice pastes or gels, dentifrice lozenges, dentifrice gums, and mouthwashes. Preferably the product is in the form of a chewing gum containing 5-60 wt. % gum base selected from chicle and polybutenes.

The product is free from all foam suppressors, selected from polyacrylates, sulfonated polyacrylate oligomers,

polydimethylsiloxanes, azacycloalkane-2,2-diphosphonic acids, synthetic **polymeric** carboxylates, and their congeners.

The dental product further comprises: 5-60 wt. % of polyol humectants, selected from glycerin, mannitol, polyethylene glycol and sorbitol; and 0.001-5 wt. % sweeteners selected from acesulfame, aspartame, dihydrochalcones, glycyrrhizin and its derivatives, raw and extracted licorice, saccharin, stevia and the rebaudiosides, sucralose, and talin and the thaumatins.

The product may further contain: 1-60 wt. % of a mild abrasive having a hardness at most that of tooth enamel, selected from calcium carbonate, dibasic calcium **phosphate**, tribasic calcium **phosphate**, calcium **pyrophosphate** and hydroxyapatite; 1-60 wt. % of a strong abrasive having a hardness more than that of tooth enamel, selected from alumina, **silica**, titania, and fluoroapatite; 0.1-10 wt. %

flavor; 1-2000 ppm by weight of a fluoride containing compound selected from **sodium** fluoride and **sodium monofluorophosphate**; 0.1-10 wt. % of a mono-, di- or polydentate acid or its salt selected from citric acid, ethylene diamine tetraacetic acid, ascorbic acid and sulfuric acid, to maintain the pH at 6-10; 0.1-10 wt. % of a preservative selected from paraben, **potassium** sorbate and calcium propionate; 0.1-1.0 wt. % of an antioxidant selected from ascorbic acid, alpha-tocopherol, beta-carotene, coenzyme Q10 and melatonin; 5-95 wt. % water; and 0.1-10 wt. % of a thickener selected from colloidal cellulose, hydrated **silica**, polyethylene glycol and polyvinylpyrrolidone.

The product may be in the form of a dentifrice tablet containing 0.1-10 wt. % of a tablet lubricant selected from calcium stearate, magnesium stearate, hydrogenated vegetable oil and beeswax.

ABEX

UPTX: 19990630

EXAMPLE - A typical toothpaste formulation was prepared comprising (weight %): Syldent 15 (RTM; thickening **silica**) (9.00); Syldent 700 (RTM; abrasive **silica**) (7.00); xylitol (36.00); distilled water (33.82); glycerin (6.28); Pluronic F127 (RTM; poloxamer) (4.00); Aqualon 7MF (RTM; cellulose gum) (1.40); Methocel K15M Premium (RTM; hydroxypropylmethyl cellulose) (0.50); flavor (1.00); color (0.75); **sodium** fluoride (0.24); and **sodium** hydroxide (0.01).

Patients using the above formulation reported experiencing less plaque and tartar, firmer and healthier looking gum tissue, reduced pocket depth, less bleeding on probing, greatly reduced canker sore recurrence, and significantly reduced tooth sensitivity. The toothpaste tasted so good that nearly all patients improved their oral hygiene, compared to the 20 % expected.

L129 ANSWER 25 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-231008 [20] WPIX

DNC C1999-068065

TI Surfactant granulate useful e.g. in toothpaste or gel.

DC D21 E19

PA (HENK) HENKEL KGAA

CYC 1

PI DE 29821774 U1 19990408 (199920)* 15 A61K007-16 <--

ADT DE 29821774 U1 DE 1998-2021774 19981209

PRAI DE 1998-29821774 19981209

IC ICM A61K007-16

ICS C11D001-12

AB DE 29821774 U UPAB: 20011203

NOVELTY - **Surfactant** granulate is obtained by simultaneous drying and granulation of 60-90 weight% aqueous pastes containing 12-14C **fatty alcohol sulfates** with an **unsulfated** 12-14C **fatty alcohol** fraction of 0.2-0.8 weight%.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for mouth and tooth care formulations containing the granulate.

USE - The granulate is used in mouth and tooth care formulations (claimed), e.g. toothpaste and gels.

ADVANTAGE - The **surfactant** granulates are not only very compatible with the mucous membranes but also form a very stable, creamy foam and have a satisfactory taste. There is a synergistic increase in these properties if they are mixed with other **surfactants**, especially alkyl ether **sulfates**, **fatty acid** polyglycol ester **sulfates**, monoglyceride ether **sulfates** and/or alkyloligoglycosides, allowing a reduction in the fraction of **surfactants**.

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: D08-B08; E05-A; E10-A09A; E10-E04L5

TECH UPTX: 19990517

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compounds: The 12-14C

fatty alcohol sulfates are of formula (I);

R1 = linear or branched, (un)saturated 12-14C hydrocarbyl;

X = an alkali(ne earth) metal, ammonium, alkylammonium, alkanolammonium or glucammonium.

Preferred Composition: The paste may also contain **fatty**

acid polyglycol ester sulfates, alkyl ether

sulfates, monoglyceride (ether) **sulfates** and alkyl

and/or alkenyloligoglycosides. The formulation contains 1-10 wt.%

granulate. It may also contain granulates of **fatty acid**

polyglycol ester sulfates, alkyl ether **sulfates**,

monoglyceride (ether) **sulfates** and alkyl and/or

alkenyloligoglycosides, in which case, the weight ratio of the

surfactant granulates is 10:90 to 90:10. Other ingredients are

abrasives and polishes, humectant, aromatic and optionally other

ancillaries. The formulation especially contains 15-25 wt.% abrasive and

polish, 30-65 wt.% humectant, 1-10 wt.% **surfactant** granulates,

1-2 wt.% aromas and optionally 0-5 wt.% other ancillaries.

ABEX UPTX: 19990517

SPECIFIC COMPOUNDS - A specific example of the **fatty alcohol**

sulfate is **sodium lauryl sulfate**.

EXAMPLE - An acid half-**sulfate** of lauryl alcohol was spray

neutralized with 50 weight% aqueous NaOH solution (propellant gas NH₃) and

dried and granulated directly. The process used a fluidized bed with a

diameter of 400 mm and surface area of 0.13 m²; air velocity of 2.35 m/s;

temperatures of 85degreesC for the bottom air, 20degreesC for safety air,

62degreesC for fluidizing air about 5 cm above the bottom plate and

60degreesC for discharged air. The throughput was 30 half-**sulfate**

and 7.1 NaOH and the initial mass was 20 kg. The product contained 99 weight%

surfactant and at most 1 weight% water and 0.6 weight% 12/14 C

fatty alcohols and had a bulk density of 600 g/l. The sieve

analysis was 2.5 weight% 1.6 mm, 28.6 weight% 0.80 mm, 25.3 weight% 0.80 mm,

25.3

weight% 0.60 mm, 24.7 weight% 0.40 mm, 12.6 weight% 0.20 mm and 6.3 weight%

0.10

mm. The fraction coarser than 2.5 mm was less than 5 weight%. Toothpaste was

formulated from 5.0 weight% **lauryl sulfate** granulate (

Texapon (RTM) CPG), 25.0 weight% glycerol (86 weight%), 1.4 weight% xanthan

gum (Keltrol (RTM) F), 15.0 weight% sorbitol (70 weight%), 23.0 weight%

precipitated **silica** (Sident (RTM) 12 DS), 1.0 weight% titanium

dioxide, 0.22 weight% **sodium** fluoride, 0.1 weight% **potassium**

methylparaben (Nipagin (RTM) M), 0.25 weight% **sodium** saccharin, 1.0

weight% aromas, 0.5 weight% dyes and water to 100 weight%. This had a

Brookfield

viscosity of 270 Pa.s (23 degreesC, TE spindle, 5 rpm) and

Wilsmann foam of 700 ml.

L129 ANSWER 26 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1999-214907 [18] WPIX

DNC C1999-063285

TI Tooth whitening preparation reducing stain build-up comprises water-soluble alkali metal **tripolyphosphate**.

DC A14 A96 D21

IN CASH, M; DAVIS, G; DESAI, I; FORWARD, G C; LAYER, T; MCCONVILLE, P S; FORWARD, G S

PA (SMIK) SMITHKLINE BEECHAM CORP; (SMIK) SMITHKLINE BEECHAM PLC

CYC 72

PI WO 9912517 A1 19990318 (199918)* EN 39 A61K007-16 <--
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
 OA PT SD SE SZ UG ZW
 W: AL AU BA BB BG BR CA CN CZ EE GE HU ID IL IS JP KP KR LC LK LR LT
 LV MG MK MN MX NO NZ PL RO SG SI SK SL TR TT UA US UZ VN YU
 ZA 9808191 A 19990428 (199922) 38 A61K000-00 <--
 AU 9893009 A 19990329 (199932) A61K007-16 <--

ADT WO 9912517 A1 WO 1998-US18309 19980903; ZA 9808191 A ZA
 1998-8191 19980908; AU 9893009 A AU 1998-93009 19980903

FDT AU 9893009 A Based on WO 9912517

PRAI US 1998-78071P 19980316; US 1997-58315P
 19970909; US 1997-58318P 19970909

IC ICM A61K000-00; A61K007-16

ICS C11D000-00

AB WO 9912517 A UPAB: 19991103

NOVELTY - A composition for preventing the build-up of stain and whitening tooth and dental prosthesis comprises water-soluble alkali metal **tripolyphosphate** in combination with an alkali metal **pyrophosphate** salt and optionally polyvinyl pyrrolidone (PVP).

DETAILED DESCRIPTION - A dentally acceptable composition for preventing the build-up, reducing or removing, surface deposited stains from natural teeth and dental prosthesis comprises 0.5-10wt% of a water soluble alkali metal **tripolyphosphate** salt in combination with 0.1-10wt% of alkali metal **pyrophosphate** salt and 0.1-10wt% of PVP.

USE - The composition is useful for preventing the build-up, reducing or removing, surface deposited stains from teeth and dental prosthesis and also for whitening teeth and dental prosthesis.

ADVANTAGE - Alkali metal **pyrophosphate** in combination with the alkali metal **tripolyphosphate** provides improved whitening effect when compared with alkali metal **tripolyphosphate** alone. Additionally, when PVP is also included in the composition, additional effect of reducing the build-up of stains is also observed.

Dwg.1/12

FS CPI

FA AB; GI

MC CPI: A04-D05A; A12-V04B; D08-B08

TECH UPTX: 20001114

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Materials: The alkali metal **tripolyphosphate** is Na-**tripolyphosphate** present in an amount of 5-7.5 wt% of the composition. The alkali metal **pyrophosphate** is tetra **sodium pyrophosphate** in an amount of 0.1-10wt% or tetra **potassium pyrophosphate** in an amount of 0.5-10wt% of the composition.

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: PVP is present in an amount of 0.5-10 wt% of the composition.

ABEX UPTX: 20001114

EXAMPLE - A tooth whitening/stain-preventing toothpaste was prepared comprising (wt%): **sodium tripolyphosphate** (5), tetra **sodium pyrophosphate** (1), tetra **potassium pyrophosphate** (2), PVP (1), 70% sorbitol (26), abrasive silica (14), glycerin (10), thickening silica (6), polyethylene glycol 400 (3), **sodium lauryl sulfate** (1.15), TiO₂/dyes (1.5), **sodium saccharin** (0.2), xanthan gum (1), flavors (1), NaF (0.24), NaOH (0.5) and distilled water (to 100) ..

L129 ANSWER 27 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

jan delaval - 19 may 2005

AN 1999-214457 [18] WPIX

CR 1999-061772 [06]; 1999-061810 [06]; 1999-153758 [13]; 1999-190563 [16];
1999-204521 [16]; 1999-214455 [16]; 1999-214456 [16]; 1999-214458 [18];
1999-214459 [16]; 1999-214506 [18]; 1999-214507 [18]; 1999-214508 [16];
1999-214509 [18]; 1999-214510 [16]; 1999-214511 [16]; 1999-214513 [18];
1999-214514 [18]; 1999-214515 [18]; 1999-214516 [18]; 1999-243562 [16]

DNC C1999-063155

TI **Fatty acid polyglycol ester sulfate** use in
oral and dental hygiene products.

DC A28 A96 D21 E19

IN ANSMANN, A; HENSEN, H

PA (HENK) HENKEL KGAA; (COGN-N) COGNIS DEUT GMBH; (COGN-N) COGNIS DEUT GMBH &
CO KG

CYC 20

PI WO 9909942 A1 19990304 (199918)* GE 16 A61K007-16 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US

DE 19746779 A1 19990429 (199923) A61K007-16 <--

EP 1006992 A1 20000614 (200033) GE A61K007-16 <--
R: DE ES FR IT

JP 2001513535 W 20010904 (200165) 18 A61K007-16 <--

EP 1006992 B1 20020502 (200230) GE A61K007-16 <--
R: DE ES FR IT

DE 59803990 G 20020606 (200237) A61K007-16 <--

ADT WO 9909942 A1 WO 1998-EP5213 19980817; DE 19746779 A1 DE
1997-1046779 19971023; EP 1006992 A1 EP 1998-946359 19980817
, WO 1998-EP5213 19980817; JP 2001513535 W WO 1998-EP5213
19980817, JP 2000-507334 19980817; EP 1006992 B1 EP
1998-946359 19980817, WO 1998-EP5213 19980817; DE 59803990
G DE 1998-503990 19980817, EP 1998-946359 19980817,
WO 1998-EP5213 19980817

FDT EP 1006992 A1 Based on WO 9909942; JP 2001513535 W Based on WO 9909942; EP
1006992 B1 Based on WO 9909942; DE 59803990 G Based on EP 1006992, Based
on WO 9909942

PRAI DE 1997-19746779 19971023; DE
1997-19736906 19970825; DE 1997-19741911
19970925

IC ICM A61K007-16
ICS A61K007-50; C07C309-10

AB WO 9909942 A UPAB: 20020613

NOVELTY - **Fatty acid polyglycol ester sulfates**
are used in the production of oral and dental hygiene products.
DETAILED DESCRIPTION - The **fatty acid polyglycol**
ester sulfates are of formula (I);
R1CO = linear or branched (un)saturated acyl with 6-22 carbon (C)
atoms;
x = 1-3 on average;
AO = CH₂CH₂O-, CH₂CH(CH₃)O- and/or CH(CH₃)CH₂O-;
X = an alkali(ne earth) metal, ammonium, alkylammonium,
alkanolammonium or glucammonium
. An INDEPENDENT CLAIM is also included for an oral and hygiene
product formulation.
USE - The products are useful e.g. as toothpaste or tooth-polishing
gels.
ADVANTAGE - (I) are very compatible with the mucous membranes, form a
very stable and creamy foam and have a satisfactory flavor. Mixtures with
other **surfactants** have a synergistic effect on these properties,
so that the fraction of **surfactant** can be reduced.
Dwg.0/0
FS CPI

FA AB; GI; DCN

MC CPI: A10-E24; **A12-V04B**; **D08-A**; E05-A; E07-A02H;
E10-A09A

TECH UPTX: 19990503

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Foliated **silicates** and zeolites may be added as abrasives and polishes.TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred **Surfactants**:(I) may be used with co-**surfactants** selected from alkyl (ether)**sulfates** (II), monoglyceride (ether) **sulfates** (III) and

alk(en)yloligoglycosides (IV) of the formulae;

R2 = linear or branched 6-22C alk(en)yl;

n = 0-10;

R3CO = linear or branched 6-22 C acyl;

a + b + c = 0-30;

S' = an alkali(ne earth) metal;

R4 = 4-22 C alk(en)yl;

G = a sugar residue with 5 or 6 C;

p = 1-10.

The amount of (I) or mixture in finished formulations is 1-10 wt.%, whilst the weight ratio of (I) and co-**surfactants** is 10:90 to 90:10.Preferred Composition: Abrasives and polishes and/or glycerol, sorbitol and/or polyethylene glycol as humectants may be added. The oral and dental hygiene products especially contain 15-25 wt.% abrasive and polish, 30-65 wt.% humectant, 1-10 wt.% (I), optionally mixed with co-**surfactants**, 1-20 wt.% aroma and 0-5 wt.% ancillaries.TECHNOLOGY FOCUS - **POLYMERS** - (I) may be used with co-**surfactants** selected from alkyl(ether)**sulphates** (II),monoglyceride (ether) **sulphates** (III) and

alk(en)yloligoglycosides (IV).

The amount of (I) or mixture in finished formulations is 1-10 wt.%, whilst the weight ratio of (I) and co-**surfactants** is 10:90 to 90:10.

Abrasives and polishes including finely-divided synthetic resins and humectants including polyethylene glycols may be added.

ABEX UPTX: 19990503

SPECIFIC COMPOUNDS - Specific examples of abrasives and polishes are chalk, dicalcium **phosphate**, **sodium** bicarbonate, insoluble **sodium metaphosphate**, aluminum **silica**, hydrotalcite, calcium **pyrophosphate**, **silica**, alumina (trihydrate), talc, magnesium aluminum **silicate**, calcium **sulfate**, magnesium carbonate and magnesium oxide.EXAMPLE - Toothpaste contained 4.0 weight% lauric acid + 1 EO **sodium** salt, 25.0 weight% glycerol (86 weight%), 1.4 weight% xanthan gum (Keltrol F

(TM)),

15.0 weight% sorbitol (70 weight%), 23.0 weight% precipitated **silica**Sident 12 DS (TM)), 1.0 weight% titanium dioxide, 0.22 weight% **sodium**fluoride, 0.1 weight% **potassium** methylparaben (Nipagin M (TM)),0.25 weight% **sodium** saccharin (Saccharin Na (TM)), 1.0

weight% aroma, 0.5 weight% dye and water to 100 weight%. The Brookfield

viscosity

was 270 Pa.s (23degreesC; TE spindle); and Wilsmann foam 700 ml.

DEFINITIONS - Preferred Definitions:

R1CO = 12-18 C acyl;

x = 1 or 2;

AO = CH₂CH₂O;X = **sodium** or ammonium.

L129 ANSWER 28 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1998-328364 [29] WPIX

DNC C1998-101129

TI Biologically active glass containing oral composition - used for tooth-paste and mouth wash.

DC B06 D21 E37 L01

PA (SUNZ) SUNSTAR CHEM IND CO LTD

CYC 1

PI JP 10120540 A 19980512 (199829)* 5 A61K007-16 <--

ADT JP 10120540 A JP 1996-299614 19961023

PRAI JP 1996-299614 19961023

IC ICM A61K007-16

ICS C01B025-32; C03C003-078; C03C012-00

AB JP 10120540 A UPAB: 19980722

Biologically active glass containing oral composition contains 0.001-50 weight% composition comprising 25-60 weight% silica, 15-60 weight% calcium oxide and 0-30 weight% phosphorus pentoxide and optionally sodium oxide, potassium oxide, lithium oxide, titanium dioxide, alumina, boron oxide, zirconium dioxide, fluorine, niobium pentoxide, lanthanum oxide, tantalum pentoxide, yttrium oxide, strontium oxide, barium oxide and/or zinc oxide. The composition particularly has sizes of < 32 mesh.

USE - The composition is used for tooth paste, mouth wash, tooth brushing powder or paste, gel, chewing gum and troches.

ADVANTAGE - A homogenous hydroxyapatite film is rapidly formed on teeth.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B05-A01B; B05-A02; B05-B02A3; B05-B02C; B14-N06; D08-B08; E31-P06E; L01-A01B; L01-L

L129 ANSWER 29 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1996-505343 [50] WPIX

DNC C1996-158478

TI Aqueous based oral compsns. - comprising the potassium salt of 2,4,4'-tri chloro-2'-hydroxy-di phenyl ether as antibacterial agent.

DC B05 D21

IN TOY, A

PA (COLG) COLGATE PALMOLIVE CO

CYC 1

PI US 5571501 A 19961105 (199650)* 4 A61K007-16 <--

ADT US 5571501 A US 1994-213279 19940315

PRAI US 1994-213279 19940315

IC ICM A61K007-16

ICS A61K031-085

AB US 5571501 A UPAB: 19970108

The following are claimed: (A) aqueous based oral compsn. comprising an oral vehicle and the potassium salt of 2,4,4'-trichloro-2'-hydroxydiphenyl ether (triclosan) as the sole antibacterial agent. (B) aqueous based oral compsn. comprising an oral vehicle, the potassium salt of triclosan, and an alkali metal salt, the triclosan salt having improved compatibility with the alkali metal salt in the compsn..

USE - The compsns. can be used as mouth rinses or dentifrices, they show improved compatibility of triclosan in aqueous based oral compsns.

ADVANTAGE - The potassium salt of triclosan is compatible with other potassium salts (potassium pyrophosphate or potassium nitrate) in the oral compsn.. This reduces loss of triclosan during storage and before use, thus improving the antibacterial action of the compsns..

Dwg.0/0
 FS CPI
 FA AB; DCN
 MC CPI: B05-A01A; B10-E02; B12-M02A; **B14-N06A; D08-B08**

L129 ANSWER 30 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1994-234308 [28] WPIX

DNC C1994-106517

TI Chewing gums for disruption of plaque, treatment of gingivitis or tooth hypersensitivity, etc. - are coated with an emulsion comprising an ingestible **surfactant**-emulsifier and a poly di methyl **siloxane** cpd..

DC A96 B06 B07 D21 E19 E37

IN HILL, I D

PA (WHIT-N) WHITEHILL ORAL TECHNOLOGIES INC; (WHIT-N) WHITEHILL ORAL TECHNOLOGIES

CYC 22

PI WO 9414424 A1 19940707 (199428)* EN 46 A61K009-68 <--
 RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
 W: AU CA JP

AU 9458036 A 19940719 (199439) A61K009-68 <--

US 5380530 A 19950110 (199508) 14 A61K009-68 <--

EP 676957 A1 19951018 (199546) EN A61K009-68 <--

R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

AU 670994 B 19960808 (199640) A23G003-30 <--

JP 08505140 W 19960604 (199648) 42 A61K009-68 <--

EP 676957 A4 19970604 (199746) A61K009-68 <--

MX 186055 B 19970922 (199850) A61K009-068 <--

CA 2152813 C 19990202 (199916) A61K009-68 <--

ADT WO 9414424 A1 WO 1993-US12261 19931216; AU 9458036 A AU 1994-58036 19931216; US 5380530 A US 1992-996939 19921229; EP 676957 A1 WO 1993-US12261 19931216, EP 1994-903672 19931216; AU 670994 B AU 1994-58036 19931216; JP 08505140 W WO 1993-US12261 19931216, JP 1994-515290 19931216; EP 676957 A4 EP 1994-903672 ; MX 186055 B MX 1994-278 19940105; CA 2152813 C CA 1993-2152813 19931216

FDT AU 9458036 A Based on WO 9414424; EP 676957 A1 Based on WO 9414424; AU 670994 B Previous Publ. AU 9458036, Based on WO 9414424; JP 08505140 W Based on WO 9414424

PRAI US 1992-996939 19921229

REP US 4609543; EP 263224; EP 528457; GB 728759; GB 789851; US 2806814; US 4950479; US 5135761

IC ICM A23G003-30; A61K009-068; A61K009-68

ICS A23G003-030; A61K007-16

AB WO 9414424 A UPAB: 19940831

Chewing gum, coated with an emulsion comprising (a) an ingestible **surfactant**-emulsifier and (b) a polydimethyl **siloxane** which is insoluble in the **surfactant**-emulsifier, is new. The emulsion is applied to the gum by a coating process selected from printing, film coating, adhesive applications and textile dyeing. The emulsion is releasable during chewing.

The emulsion coating may comprise antimicrobial agents, microbially active stannous fluoride, chlorhexidine, trichlosan, zinc chloride, cationic antimicrobial agents, cetyl pyridinium chloride, antioxidants, propyl gallate, enzymes, antibiotics, tetracycline, mineral salts, pectin, strontium chloride, **potassium nitrate**, metranidazole, benzocaine etc.

USE/ADVANTAGE - The chewing gums provide plaque disruption, gingivitis control, hypersensitivity treatment, stomatitis treatment, etc. The chewing gums are pleasant to use and encourage frequent use throughout

the day.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A06-A00E; A06-A00E3; A11-B05; A12-W09; B04-C03D; B12-M09;
B14-E11; B14-N06; D08-A05; E07-A02D; E07-D04A;
E10-A09A; E10-A17A; E10-E02D3; E10-E02F1; E10-E04K; E33-E;
E34-D03; E35-C; E35-H

ABEQ US 5380530 A UPAB: 19950301

Oral hygiene compsn. comprises a chewing gum coated with an emulsion of nontoxic **surfactant** emulsifier, a **polydimethylsiloxane** which is insol. in the emulsifier, and opt. one or more therapeutic agents. The emulsion is applied to the **surface** of the chewing gum by the usual coating processes.

USE - The prods. are oral prophylactics and therapeutics for bacterial infection, plaque, gingivitis, hypersensitivity and stomatitis.

ADVANTAGE - The prods. are easily administrated and provide a continuous and gradual release of **active** substances over a long period.

Dwg.0/0

L129 ANSWER 31 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1994-191475 [23] WPIX

CR 1994-191476 [23]; 1995-262673 [34]; 1995-282542 [37]

DNC C1994-087558

TI Tooth-paste compsn. for reduction of plaque and gingivitis - contains **surfactant**, enzyme, fluoride ion source, **silica** abrasive and chelating agent comprising citric acid and alkali metal citrate.

DC A96 B05 D16 D21 E19 E37

IN LUKACOVIC, M F; MAJETI, S

PA (PROC) PROCTER & GAMBLE CO

CYC 49

PI US 5320830 A 19940614 (199423)* 8 A61K002-16 <--
WO 9415579 A1 19940721 (199430) EN 25 A61K007-28 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK LV MG MN MW NO NZ PL RO
RU SD SK UA UZ VN
AU 9458041 A 19940815 (199442) A61K007-28 <--
EP 676950 A1 19951018 (199546) EN A61K007-28 <--
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
CN 1095586 A 19941130 (199547) A61K007-16 <--
BR 9307801 A 19951114 (199603) A61K007-28 <--
CZ 9501735 A3 19951213 (199606) A61K007-28 <--
JP 08505390 W 19960611 (199648) 30 A61K007-28 <--
HU 72472 T 19960429 (199742) A61K007-28 <--
CA 2151935 C 19990511 (199937) EN A61K007-28 <--
MX 188665 B 19980417 (200027) A61K007-016 <--

ADT US 5320830 A US 1992-998709 19921230; WO 9415579 A1 WO
1993-US12475 19931220; AU 9458041 A AU 1994-58041 19931220;
EP 676950 A1 WO 1993-US12475 19931220, EP 1994-903684
19931220; CN 1095586 A CN 1993-121733 19931230; BR 9307801
A BR 1993-7801 19931220, WO 1993-US12475 19931220; CZ
9501735 A3 CZ 1995-1735 19931220; JP 08505390 W WO
1993-US12475 19931220, JP 1994-516038 19931220; HU 72472 T
WO 1993-US12475 19931220, HU 1995-1950 19931220; CA
2151935 C CA 1993-2151935 19931220, WO 1993-US12475
19931220; MX 188665 B MX 1994-66 19940103
FDT AU 9458041 A Based on WO 9415579; EP 676950 A1 Based on WO 9415579; BR
9307801 A Based on WO 9415579; JP 08505390 W Based on WO 9415579; HU 72472

T Based on WO 9415579; CA 2151935 C Based on WO 9415579

PRAI **US 1992-998709** 19921230; **US 1992-998710**
19921230

REP DE 1940223; DE 1948298; DE 2044534; DE 3721169; EP 315503; EP 354447; LU
61421; US 4069311; US 4869898; US 5176899; WO 8800043; WO 9107163

IC ICM A61K002-16; A61K007-016; **A61K007-16**; **A61K007-28**

ICS **A61K007-18**; A61K009-018; A61K009-024; A61K009-18;
A61K009-24

AB US 5320830 A UPAB: 20000606

Toothpaste compsn. having a pH 4.0 to below 6.0 free from calcium ion sources comprises (a) a **surfactant**; (b) an enzyme; (c) chelating agent comprising 0.1-10% citric acid and 1-10% alkali metal citrate; (d) a fluoride ion source; (c) a **silica** abrasive, and (f) a carrier.

This refers to an oral compsn. comprising a **surfactant**, an enzyme, a chelating agent having a calcium binding coefft. of 10 power 2 to 10 power 5, a fluoride ion source and a carrier, having pH 4.0 to below 6.0, and being free of materials which complex with fluoride ions.

The **surfactant** is **sodium lauryl sarcosinate**, **sodium alkyl sulphate**, **cocoamidopropyl betaine** and/or polysorbate 20, pref. present in an amount of 0.1-5%. The enzyme is endoglycosidase, papain, dextranase and/or mutanase pref. present in an amount of 0.002-2%. The fluoride ion source is **sodium** fluoride, stannous fluoride, **sodium monofluorophosphate** and/or **potassium** fluoride. Suitably there is also present glycerin and/or sorbitol as humectant, in an amount of 15-70%.

USE - Toothpaste reduces plaque and thereby abates formation and accumulation of calculus. The chelating agent binds calcium found in the cell wall of bacteria thereby weakening the cell wall and augmenting bacterial lysis of plaque-forming bacteria.

In an example, a dentifrice comprises sorbitol (49.127), Carbopol 956 (0.250), xanthan gum (0.425), TiO₂ (0.525), **silica** (20.000), citric acid (0.900), **sodium** citrate (5.000), 30% solution of **sodium lauryl sarcosinate** (6.250), NaF (0.243), F D & C blue #1 (0.050), flavour (0.900), water (q.s.) and **sodium** saccharin (0.130). Percentages are weight%.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **A12-V04B**; B04-C03C; B04-L05C; B05-C07; B10-A09; B10-C02;
B12-M02A; D05-C03C; **D08-B08**; E10-C02A; E31-K07;
E31-P03; **E33-B**; **E33-E**; E35-H

L129 ANSWER 32 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1994-007156 [01] WPIX

DNC C1994-002770

TI New dentifrice compsn. containing **potassium nitrate** - for improved treatment of sensitive teeth.

DC B06 D21 E34

IN HUETTER, T E; WHITE, D J

PA (PROC) PROCTER & GAMBLE CO

CYC 44

PI WO 9325184 A1 19931223 (199401)* EN 14 A61K007-16 <--

RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE

W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU

SD SK UA VN

AU 9343988 A 19940104 (199417) A61K007-16 <--

CN 1085776 A 19940427 (199528) A61K007-16 <--

ADT WO 9325184 A1 WO 1993-**US5159** 19930601; AU 9343988 A **AU**
1993-43988 19930601; CN 1085776 A CN 1993-108906 19930610

FDT AU 9343988 A Based on WO 9325184
 PRAI US 1992-896286 19920610
 REP 1.Jnl.Ref; EP 278744; EP 346957; EP 74082
 IC ICM A61K007-16
 ICS A61K007-18
 AB WO 9325184 A UPAB: 19940217
 Dentifrice compsn. capable of reducing the pain of sensitive teeth
 comprises: (a) 1-20% of **potassium nitrate**; (b)
 1.8-3.0% of a **surfactant** selected from **sodium**
lauryl sulphate and/or **sodium alkyl**
sulphate; (c) 6-70% of a **silica** dentifrice abrasive; and
 (d) 20-60% of water.
 USE/ADVANTAGE - The compsn. gives improved treatment of tooth
 hypersensitivity caused by e.g. exposed cementum and/or dentin.
 Dwg.0/0
 FS CPI
 FA AB; DCN
 MC CPI: B04-C03B; B05-A01A; B05-B02A3; B05-B02C; B05-C02; B05-C07;
 B10-A09A; B14-N06; D08-B08; E10-A09B5; E31-K05D;
 E31-P03; E33-B; E33-E; E34-D03

L129 ANSWER 33 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1992-056616 [07] WPIX
 DNC C1992-025511
 TI Anti-calculus and anti-plaque oral care-compnsn. - contains an aza-cyclo
 alkane-2,2-di **phosphate** anion, an antimicrobial agent and an
 oral carrier.
 DC B03 B05 D21
 IN NELSON, D G A; SMITHERMAN, H C; NELSON, D G
 PA (PROC) PROCTER & GAMBLE CO
 CYC 39
 PI WO 9200721 A 19920123 (199207)* <--
 RW: AT BE CH DE DK ES FR GB GR IT LU NL OA SE
 W: AT AU BB BG BR CA CH CS DE DK ES FI GB HU JP KP KR LK LU MC MG MW
 NL NO PL RO SD SE SU
 AU 9182311 A 19920204 (199220) A61K007-16 <--
 PT 98309 A 19920529 (199227) A61K007-16 <--
 EP 539480 A1 19930505 (199318) EN 16 A61K007-16 <--
 R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
 CZ 9300215 A3 19930714 (199340) A61K007-16 <--
 HU 63323 T 19930830 (199340) A61K007-16 <--
 SK 9300101 A3 19931006 (199420) A61K007-16 <--
 EP 539480 B1 19951115 (199550) EN 10 A61K007-16 <--
 R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
 DE 69114708 E 19951221 (199605) A61K007-16 <--
 ES 2079673 T3 19960116 (199610) A61K007-16 <--
 IE 71649 B 19970226 (199717) A61K007-16 <--
 CA 2086620 C 19971014 (199802) A61K007-16 <--

ADT AU 9182311 A AU 1991-82311 19910711, WO 1991-US4850
 19910711; PT 98309 A PT 1991-98309 19910712; EP 539480 A1
 EP 1991-913575 19910711, WO 1991-US4850 19910711; CZ
 9300215 A3 CZ 1993-215 19930217; HU 63323 T WO 1991-US4850
 19910711, HU 1993-66 19910711; SK 9300101 A3 SK
 1993-101 19930217; EP 539480 B1 EP 1991-913575 19910711,
 WO 1991-US4850 19910711; DE 69114708 E DE 1991-614708
 19910711, EP 1991-913575 19910711, WO 1991-US4850
 19910711; ES 2079673 T3 EP 1991-913575 19910711; IE 71649 B
 IE 1991-2450 19910712; CA 2086620 C CA 1991-2086620
 19910711
 FDT AU 9182311 A Based on WO 9200721; EP 539480 A1 Based on WO 9200721; HU

63323 T Based on WO 9200721; EP 539480 B1 Based on WO 9200721; DE 69114708
E Based on EP 539480, Based on WO 9200721; ES 2079673 T3 Based on EP
539480

PRAI US 1990-552399 19900713; WO 1991-US4850
19910711

REP FR 2361865; US 3988443; US 4575456

IC ICM A61K007-16

AB WO 9200721 A UPAB: 19931006

Oral care compsn. comprises: (a) an effective amount of a source of an aza-cycloalkane-2,2- **diphosphate** anion as an anticalculus agent; (b) an effective amount of an antimicrobial agent; and (c) a toxicologically acceptable oral carrier.

(a) is pref. a salt of 1-azacycloheptylidene-2, 2- **diphosphonate** (AHP); (b) is pref. 5-chloro-2-(2,4-dichlorophenoxy) phenol (TRICLOSAN); and the carrier (c) pref. assists in the emulsification or solubilisation of (b). Amount of AHP is pref. 0.1-5wt.% and of TRICLOSAN is pref. 0.1-2wt.%. Compsn. additionally comprises a source of an effective amount, especially 100-1500 ppm, of fluoride ions; and a source of **pyrophosphate** ions, and/or a metal cation selected from Zn, In, Sr and stannous cations, and/or sodium **nitrate**, **potassium nitrate** or mixts. thereof.

USE/ADVANTAGE - Compsn. is used for preventing the accumulation of calculus and plaque on dental enamel, pref. by brushing the dental enamel with a toothpaste compsn. containing the oral care compsn. and an abrasive. Compsn. can also be used in the form of a mouthwash, lozenge or chewing gum.

0/0

FS CPI

FA AB; DCN

MC CPI: B05-B01E; B10-E02; B12-A01; **B12-L03**; B12-M02A;
D08-A05; D08-B08

ABEQ EP 539480 A UPAB: 19931112

Oral care compsn. comprises: (a) an effective amt. of a source of an aza-cycloalkane-2,2-**diphosphate** anion as an anticalculus agent; (b) an effective amt. of an antimicrobial agent; and (cv) a toxicologically acceptable oral carrier.

(A) is pref. a salt of 1-azacycloheptylidene-2,3- **diphosphonate** (AHP); (b) is pref. 5-chloro-2(2,4-dichlorophenoxy) phenyl (TRICLOSAN); and the carrier (c) pref. assists in the emulsification or solubilisation of (b). Amt. of AHP is pref. 0.1-5 wgt. % and of TRICLOSAN is pref. 0.1-2 wt. %. Compsn. additionally comprises a source of an effective amt. esp. 100-1500 ppm of fluoride ions; and a source of **pyrophosphate** ions, and/or a metal cation selected from Zn, In, Sr and stannous cations, and/or Na **nitrate**, **nitrate** or mixts.

USE/ADVANTAGE - For preventing the accumulation of calculus and plaque on dental enamel, pref. by brushing the dental enamel with a toothpaste compsn. contg. the oral care compsn. and an abrasive. Compsn. can also be used in the form of a mouthwash, lozenge or chewing gum.
Dwg.0/0

ABEQ EP 539480 B UPAB: 19951215

An oral care composition, comprising: (a) from 0.1% to 5% by weight of a source of an azacycloalkane-2,2-**diphosphonate** anion as an anticalculus agent; (b) from 0.1% to 2% by weight of 5-chloro-2-(2,4-dichlorophenoxy)phenol; and (c) a toxicologically acceptable oral carrier.
Dwg.0/0

L129 ANSWER 34 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1988-002224 [01] WPIX

DNC C1988-000962

TI Conditioning shampoo - containing synthetic **surfactant**,
silicone polymer, **phosphate ester**, water and
suspending agent.

DC A26 A96 D21 E19

IN OH, Y S; SINE, M R

PA (PROC) PROCTER & GAMBLE CO

CYC 2

PI GB 2192194 A 19880106 (198801)* 11 <--
JP 63045213 A 19880226 (198814) <--
GB 2192194 B 19900627 (199026) <--

ADT GB 2192194 A GB 1987-13039 19870603; JP 63045213 A JP
1987-140161 19870605

PRAI US 1986-871728 19860606

IC A61K007-07; C11D003-36

AB GB 2192194 A UPAB: 19930923

A shampoo compsn. comprises about 5-60 weight% anionic, cationic, nonionic,
zwitterionic or amphoteric synthetic **surfactants** or mixt' of
them; 0.01-10 weight% **polydimethylsiloxane** or
polydiphenylsiloxane or mixts. of them which have a mol. weight
300-1,000,000 and a viscosity of 2-20,000,000 centistokes at 25 deg.C;
0.1-5 weight% trideceth-6-**phosphate**, laureth-3-, 4- or 5-
phosphate or oleth-3-**phosphate** or their salts or mixture
thereof; and 0.5-5 wt'% xanthane, ethylene glycol esters of 16-22C
fatty acids or 16-22C alkyl dimethyl amine oxides or
mixts' of them.

The compsn. pref. contains 10-30 (more pref. 10-22) wt'%
surfactant, 0.5-5 weight% **silicone polymer**,
0.4-2.0 weight% **phosphate ester** and pref. 60-85 weight% water. The
surfactant is pref' not cationic or nonionic (and is more pref.
anionic), the suspending agent is not the amine oxide (and is more pref.
ethylene glycol disparate or xantham gum), the **phosphate ester**
is pref. not trideceth-6-**phosphate**, and the **silicone**
is pref. **polydimethylsiloxane**. The **surfactant** is pref.
selected from 22 cpds. and mixts. thereof and more pref. from 6 of those
cpds' including ammonium **lauryl sulphate**, K
cocoyl **sulphate** and Na dodecyl benzene sulphonate. The
silicone has a pref. mol. weight of 300-150,000 and a viscosity of
20-40,000 (more pref. 350-30,000) centistokes and is pref. a mixture of gum
and fluid in the weight ratio of 1:2 - 2:1.

USE/ADVANTAGE - The compsn. is stable, provides good hair cleaning
and hair-care benefits and prevents electrostatic charging of the hair
after washing.

0/0

FS CPI

FA AB; DCN

MC CPI: A06-A00E3; A12-V04A; D08-B04; E05-G09C; E05-G09D; E10-A03; E10-G02C

ABEQ GB 2192194 B UPAB: 19930923

A shampoo compsn. comprises about 5-60 wt.% anionic, cationic, nonionic,
zwitterionic or amphoteric synthetic **surfactants** or mixt' of
them; 0.01-10 wt.% **polydimethylsiloxane** or
polydiphenylsiloxane or mixts. of them which have a mol. wt.
300-1,000,000 and a viscosity of 2-20,000,000 centistokes at 25 deg.C;
0.1-5 wt.% trideceth-6-**phosphate**, laureth-3-, 4- or 5-
phosphate or oleth-3-**phosphate** or their salts or mixt.
thereof; and 0.5-5 wt'% xanthane, ethylene glycol esters of 16-22C
fatty acids or 16-22C alkyl dimethyl amine oxides or
mixts' of them.

The compsn. pref. contains 10-30 (more pref. 10-22) wt'%
surfactant, 0.5-5 wt.% **silicone polymer**,
0.4-2.0 wt.% **phosphate ester** and pref. 60-85 wt.% water. The

surfactant is pref' not cationic or nonionic (and is more pref. anionic), the suspending agent is not the amine oxide (and is more pref. ethylene glycol disparate or xantham gum), the **phosphate** ester is pref. not trideceth-6-**phosphate**, and the **silicone** is pref. **polydimethylsiloxane**. The **surfactant** is pref. selected from 22 cpds. and mixts. thereof and more pref. from 6 of those cpds' including ammonium **lauryl sulphate**, **K cocoyl sulphate** and **Na dodecyl benzene sulphonate**. The **silicone** has a pref. mol. wt. of 300-150,000 and a viscosity of 20-40,000 (more pref. 350-30,000) centistokes and is pref. a mixt. of gum and fluid in the wt. ratio of 1:2 - 2:1.

USE/ADVANTAGE - The compsn. is stable, provides good hair cleaning and hair-care benefits and prevents electrostatic charging of the hair after washing.

0/0

L129 ANSWER 35 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1987-350076 [50] WPIX

DNC C1987-149531

TI Anti-calculus oral compsn. - contains at least 1.5 pre-cent **pyrophosphate** ions and controlled **sodium** to **potassium** ion ratio.

DC A96 D21

IN SEUS, J D

PA (PROC) PROCTER & GAMBLE CO

CYC 17

PI EP 249398 A 19871216 (198750)* EN 9 <--

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

DK 8702933 A 19871210 (198810) <--

FI 8702554 A 19871210 (198810) <--

AU 8774025 A 19871210 (198814) <--

JP 63045214 A 19880226 (198814) <--

GB 2204487 A 19881116 (198846) <--

ADT EP 249398 A EP 1987-304946 19870604; JP 63045214 A JP

1987-143022 19870608; GB 2204487 A GB 1987-13040 19870603

PRAI US 1986-872356 19860609; US 1986-907138

19860912; US 1987-47374 19870513

REP A3...8929; DE 3629504; EP 97476; FR 1186136; No-SR.Pub; US 4627977

IC A61K007-16

AB EP 249398 A UPAB: 19930922

Anticalculus oral composition comprises: (a) 0 to 70 percent by weight of a dental abrasive compatible with **pyrophosphate** and fluoride ions.

(b) a fluoride ion source sufficient to supply 50 to 3,500 ppm fluoride ions (c) at least 1.5 percent of a **pyrophosphate** ion and (d) 2 to 95 percent water.

The pH of the composition is from about 6.0 to 10.0 and contains **Na** ions and **K** ions in a ratio of 0.2:1 to 5.7:1. It also does not contain more than 0.5 percent total dialkali metal **pyrophosphate** sources opt. 0.5 percent **sodium** cyclamate is present.

In an example, toothpaste was prepared with the following composition (by weight) 65% **tetrapotassium pyrophosphate** solution (6.8%), **sodium acid pyrophosphate** (0.4%), flavour (1.04%), PEG-6 (2.0%), glycerol (8.0%), NaF (0.24%), 70% sorbitol (32.0%), **silica** abrasive (20.0%), distilled water (21.02%), (27.9%) **sodium alkyl sulphate** solution (4.00%), **sodium** cyclamate (3.27%), rutile titanium dioxide (0.53%), xanthan gum (0.40%), carbopol 9 +0 (0.25%) and (1%) FD and C. Blue No.1 solution (0.05%). The ratio of **Na** to **K** in this toothpaste was 0.32, the pH is adjusted to 7.6 and the paste contained 1100 ppm fluoride

ions. USE - By controlling the ratio of **sodium** to **potassium** ions the formation of dental tartar.

/0

FS CPI

FA AB

MC CPI: A12-V04B; D08-B08

L129 ANSWER 36 OF 36 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1982-38452E [19] WPIX

TI Medicated effervescent compsn. containing di methyl **polysiloxane** - as stabiliser, used as artificial teeth cleaning agent, bactericide.

DC A96 B07 D13 D21 D25 E19 E37

PA (KAOS) KAO SOAP CO LTD

CYC 1

PI JP 57056434 A 19820405 (198219)* 6

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PRAI JP 1980-132063 19800922

IC A61K009-46; A61K047-00

AB JP 57056434 A UPAB: 19930915

Effervescent compsn. obtd. by incorporating dimethyl **polysiloxane** or its degenerated prod. into a compsn. comprising a pharmaceutical cpd. and an effervescent disintegrator. The compsn. is useful in orally administrable drugs, soft drinks, cleaning agents for artificial teeth, bactericides, bleaching agents, cleansers, deodorisers, anticorrosives, etc. Addition of dimethyl **polysiloxane** stabilises the compsns.

Pref. pharmaceutical cpds. are used in amount in 0.1-40 w/w%. Pref. the effervescent disintegrator comprises an acid component and a (bi)carbonate. Examples of acids are oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, tartaric acid, citric acid, glycolic acid, diglycolic acid, nitrilotriacetic acid, EDTA and their salts. Pref. the ratio of acid component:(bi)carbonate is 5-30:25-65 (by weight).

In an example, NaHCO₃ (40%) was mixed with dimethyl **polysiloxane** having a viscosity of 500 cs (0.1%) and **silicon** oil KF96-500. Tartaric acid (15%), **sodium alkyl sulphate** (3%), polyoxyethylene lauryl ether (3%) and **sodium sulphate** were blended with the mixture. The resultant compsn. was packed in a sealed form and stored at 50 deg.C for 20 days. After 20 days, the compsn. showed good effervescent property.

FS CPI

FA AB

MC CPI: A06-A00E; A10-E05; A12-V04; A12-W12; B04-C03D; B05-C04; B05-C08; B10-B01B; B10-B02J; B10-C02; B12-M06; D03-H01F; D08-B08; D08-B09; D11-B; E10-B01C; E10-B02D; E10-C04D; E33-D; E34-B; E34-D03

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